|  |  |
| --- | --- |
|  | MINISTRY OF HEALTHCARE OF THE RUSSIAN FEDERATION  State Government-Funded Educational Budgetary Institution of Higher Education  «NORTHERN STATE MEDICAL UNIVERSITY»  of Ministry of Healthcare of the Russian Federation |

|  |  |
| --- | --- |
|  | «APPROVED»  Dean of the International Faculty of General Practitioner  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  «\_\_\_\_»\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_2016 г. |

**SYLLABUS OF DISCIPLINE (MODULE)**

Discipline **"Faculty Surgery, Urology"**

**Module Faculty Surgery**  
Field of training 31.05.01 «General medicine»

Year of training - 4

Form of the interim attestation – Exam 8th semester

Chair of Surgety   
Course workload 180 hours / 5credits

|  |  |
| --- | --- |
|  | Reviewed at the department meeting  Protocol №  « » 2016  Head of the department  B.L. Duberman |

**Author and compiler:**

associate professor

of the Chair of Surgery

D.V. Mizgirev

|  |  |
| --- | --- |
|  |  |

Arkhangelsk, 2016

**1. Purpose and objectives of the course**

Graduates with a degree in general medicine 05.31.01 get qualification of a doctor, and should be prepared to following activities:

- Medical care

- Organization and management

- Research

**The purpose** of studing Surgery and Urology for students of the IV course of the international faculty of general practitioner is to prepare general practitioners to be able to focus on issues of injuries and diseases of the abdominal cavity and urogenital system and provide first aid in case of urgent pathology and chronic diseases of abdominal organs and abdominal wall.

**Objectives of the discipline**:

- Teaching of students the principles of organization and operations of surgical and urological department, the prevention of infectious, parasitic and non-infectious diseases in the outpatient surgery;

- Development of students knowledge of etiology, pathogenesis, clinical signs, treatment and prevention of surgical and urological diseases;

- Introduce students with the principles of the measures for the prevention of nosocomial infections in health care institutions, creation of favorable conditions of stay of patients and working conditions of health personnel;

- Development of students diagnostics principles of surgical and urological diseases that cause life-threatening complications, and patients with co-morbidities;

- Teaching of students the correct formulation of the preliminary and final clinical diagnosis and referral for additional examination;

- Formation of students' abilities to provide pre-hospital care for patients with injuries and wounds in peacetime

**2. Location of the course within the educational program (****EP)**

The program is developed following the requirements of Federal State Education Standard (FSES) for higher education in the field of 31.05.01«General medicine».

Cycle (section) of the EP, to which this discipline applies - professional.  
Disciplines, on wich knowledge of Faculty Surgery is based: Human Anatomy and Morbid Anatomy, Normal and Pathological Physiology, Microbiology and Immunology, Pharmacology, Operative Surgery and Topographic Anatomy, General Surgery, Neurology, Anesthesiology and Resuscitation, X-ray Diagnostics, Public Health and Health Organization, Emergency Medicine .

**3. List of planned learning outcomes of the discipline (module) in connection to the planned outcomes at completion of the educational program**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Codes of developed competences** | **Competences** | | | | |
|  | Know | Be able to  (can) | | Master  (be a master in) | |
| PC -№ | **General professional competences** | | | | |
| GPC-6 | To know the list of medical records of surgical department and outpatient surgical office | | To be able to determine the appropriate amount of information for registration in the medical records | | Be skilled in chart and ambulatory surgical patient card recording |
|  | **Professional competences** | | | | |
| PC-5 | Know the procedure of surgical examination of the patient using methods of collecting and analyzing patient’ complaints, history, examination results, laboratory, instrumental, post-mortem and other studies | To be able to collect and analyze patient’ complaints, history, examination results, laboratory, instrumental, pathologist’s and other research in order to recognize the condition or fact of establishing the presence or absence of disease | | Be skilled in analyzing the results of examination, inspection, laboratory, instrumental, and other studies to recognize the condition or fact of establishing the presence or absence of disease | |
| PC-6 | Know the basic pathological conditions, symptoms, syndromes, diseases of surgical patients in accordance with the International Classification of Diseases and related health problems, 10th revision | To be able to identify basic pathological conditions, symptoms, syndromes, diseases of surgical patients in accordance with the International Classification of Diseases and related health problems, 10th revision | | To be skilled in identification of basic pathological conditions, symptoms, syndromes, diseases of surgical patients in accordance with the International Classification of Diseases and related health problems, 10th revision | |
| PC-8 | Know the possible tactics of treatment of surgical patients with different nosological forms | To be able to make an algorithm ща tactics of diagnosis and treatment of surgical patients with different nosological forms | | To be skilled in selection of surgical patients with different nosological forms to choose optimal treatment tactics | |
| PC-9 | Know the principles of management and treatment of surgical patients with different nosological forms in the outpatient setting and a day-case surgery | To be able to determine indications for management and treatment of surgical patients with different nosological forms in the outpatient setting and a day-case surgery | | To be skilled in selection of surgical patients with different nosological forms for management and treatment of surgical patients with different nosological forms in the outpatient setting and a day-case surgery | |
| PC-10 | Know the principles of surgical care in patients with acute disease, conditions, exacerbation of chronic diseases, that are not accompanied by life-threatening condition and do not require emergency medical care | To be able to determine indications for management and treatment of surgical patients with acute disease, conditions, exacerbation of chronic diseases, that are not accompanied by life-threatening condition and do not require emergency medical care | | To be skilled in selection of surgical patients with different nosological forms of acute disease, conditions, exacerbation of chronic diseases, that are not accompanied by life-threatening condition and do not require emergency medical care | |
| PC-11 | Know algorithms of emergency medical care to surgical patients with conditions requiring urgent medical intervention | To be able to determine indications for emergency medical care to surgical patients with conditions requiring urgent medical intervention | | To be skilled in selection of surgical patients with different nosological forms for emergency medical care to surgical patients with conditions requiring urgent medical intervention | |

**4. Volume of the course and types of academic work:**

**Module of Faculty Surgery**

**4.1. Workload of the Module and Type of the academic work**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of the academic work** | **Total hours** | **Term** | |
| **7** | **8** |
| **In-class learning (total)** | 102 | 55 | 47 |
| Including: |  |  |  |
| Lectures (L) | 32 | 20 | 12 |
| Clinical practicals (CP) | 70 | 35 | 35 |
| **Self-studies (total)** | 42 |  |  |
| **Examination** | 36 | - | 36 |
| **Total course workload (hours)** | 180 |  |  |

**5. Module content:**

5.1. Content of the course sections

|  |  |  |
| --- | --- | --- |
| **№** | **Name of the course section** | **Content of the section** |
| 1 | 2 | 3 |
| 1. | Introduction. The methodology of diagnostics in surgery | Introduction. Differential diagnosis of surgical diseases. Diagnosis of most frequent surgical diseases, principles of treatment and prophylaxis. Diagnosis as a scientific discipline, including diagnostic equipment, semiology, especially thinking in recognizing of the disease. The diagnosis, definition, diagnosis as a basis for treatment and prevention. The main types of diagnosis: clinical, anatomopathological, forensic. Types according to the method of construction of the diagnosis: the direct diagnosis or by analogy, differential diagnosis, and as part of it - a diagnosis by exclusion, diagnosed with synthetic or full diagnosis by observation, the diagnosis for therapeutic effect. Types of diagnosis on the degree of validity: preliminary diagnosis, i.e., hypothetical, final diagnosis, or well-founded, the diagnosis in question. Abstract diagnosis (disease diagnosis) and specific diagnosis (the diagnosis of the patient). Making the full-scale clinical diagnosis. The role of the medical history, physical examination of the patient, laboratory and instrumental methods in the surgical clinic. Operative treatment and its significance. Ways to reduce the risk associated with the use of surgical treatment. The value of the study of body functions before surgery, during it and after it. Writing history with differential diagnosis. Independent work with the patient: questioning, examination (general and systems), analysis of the results of laboratory and instrumental methods of investigation, the systematization of the data, compilation of clinical diagnosis and its rationale. |
| 2. | The most important syndromes in surgery | The shock, the pathogenesis of shock. Centralization of blood circulation, microcirculation disturbances and tissue perfusion. Metabolic disorders. Classification of shock. Organ dysfunction in shock. The syndrome of multiple organ failure. Principles of treatment of shock. Systemic inflammatory response and sepsis. Principles of treatment of septic patients. Prevention of surgical infections. Disorders in surgical patients metabolism. Water - electrolyte balance. The acid-base status. |
| 3. | Operation and postoperative period | Preoperative period and evaluation of the risk of surgery. Operational risk. Methods of anesthesia in abdominal surgery. Mechanisms of development of complications in diseases of the abdominal organs. Postoperative complications in abdominal surgery. Prevention of postoperative complications. Principles of treatment of patients in the postoperative period. Intensive observation, intensive care, anesthesia in the postoperative period |
| 4. | Diseases of the abdominal organs  Topic 1. Acute appendicitis  Topic 2. Diseases of the liver and biliary system  Topic 3 Pancreatitis  Topic 4. Obstructive jaundice  Topic 4. Complications of peptic ulcer disease, gastrointestinal bleeding  Topic 5. Intestinal obstruction  Topic 6. Adhesive disease of the abdominal cavity  Topic 7. Acute mesenteric ischemia  Topic 8. Peritonitis | Anatomical and physiological information about the cecum and appendix. Acute appendicitis. Classification. Pathomorphological forms. Etiology, pathogenesis. Clinical signs and diagnostics. Features of clinic, depending on the position of the appendix. Acute appendicitis in children, women, pregnant women and the elderly. Treatment indications and contraindications for appendectomy, the choice of anesthesia and surgical access. Preparing patients for surgery, postoperative care. Complications of acute appendicitis: appendicular infiltrate, intraabdominal abscess (interloop, subphrenic, and pelvic abscess), pylephlebitis. Clinic of various complications; their diagnostics (ultrasound, CT, and others) and treatment (surgery, ultrasonic method for draining abscesses). Peritonitis as a complication of acute appendicitis. Features of surgical intervention, depending on the prevalence of peritonitis. Indications for laparotomy technique and care of the patient in the postoperative period.  Anatomical and physiological information about the liver, gallbladder and bile ducts. Classification of diseases. The bulk process of the liver, abscesses, parasitic and non-parasitic cysts. Syndrome of portal hypertension. Acute cholecystitis. Etiology and pathogenesis. Classification. Clinic. Diagnostics (ultrasound, laparoscopy). Differential diagnosis. Treatment: conservative and operative. Indications for emergency surgery. Methods of operation. Complications of acute cholecystitis: peritonitis, subphrenic abscess, empyema of the gallbladder, cholangitis. Clinic, diagnostics, treatment.  Anatomical and physiological information about the pancreas. Classification of diseases. Acute pancreatitis. Definition. Etiology and pathogenesis. Classification. Pathological anatomy. Clinical and time periods of course of pancreatic necrosis. Diagnostics. Treatment. Therapeutic endoscopy, indications for surgical treatment and types of operations. Suppurative complications of acute pancreatitis, diagnosis and treatment. The outcomes of the disease.  Etiological factors, pathogenesis of endogenous intoxication in obstructive jaundice. Differential diagnosis of jaundice. Methods of diagnosis. Methods of decompression of the biliary system. Methods of detoxification with obstructive jaundice surgery on the biliary system organs and the pancreas in obstructive jaundice.  Anatomical and physiological information about the stomach and duodenum. Classification of diseases of the stomach. Complications of peptic ulcer: bleeding, perforation, pyloroduodenal stenosis, penetration, malignancy ulcers. The pathogenesis of complications. Perforated gastric ulcer and duodenal ulcer. Classification of perforation, pathological anatomy. Features of perforated ulcers. Diagnosis and differential diagnosis. Therapeutic tactics for different types of perforated ulcers. Types of operations. Pyloroduodenal stenosis. Pathogenesis. Clinical presentation and diagnostics. Stages of the disease. The nature violations of fundamental units of homeostasis. Gastrointestinal bleeding. Classification, clinic. Bleeding gastric ulcer and duodenal ulcer. Pathological anatomy. The pathogenesis of violations of fundamental units of homeostasis. Clinical presentation and diagnosis of gastrointestinal bleeding. Classification according to the degree of blood loss severity. Differential diagnosis. Conservative and surgical treatment of bleeding ulcers. Endoscopic hemostasis. Surgical tactics in acute gastrointestinal bleeding.  Intestinal obstruction. Definition. Classification. Dynamic (spastic, paralytic) ileus. Mechanical bowel obstruction. Simple obstruction, strangulation, mixed types. Classification of mechanical obstruction. Definition, Causes, pathogenesis. Clinical presentation, diagnosis, differential diagnosis, treatment. Stangulation. Definition, classification. Clinical presentation. Types of operations. Indications for intestinal resection. Intussusception. Definition. Types of intussusception. Causes. Pathogenesis. Intussusception as a set of simple intestinal obstruction and strangulation. Clinical presentation, diagnosis, differential diagnosis. Types of operations. Indications for disinvagination and intestinal resection.  Adhesive disease of the abdominal cavity. adhesion factors. Clinical manifestations of adhesive disease. Adhesive intestinal obstruction. Diagnostics. Conservative treatment. Indications for surgery. Surgical treatment.  Types of acute disorders of mesenteric circulation (embolism, arterial thrombosis, non-occlusive mesenteric circulatory disorders, venous thrombosis). The basic mechanisms of disease pathogenesis. Symptoms, Clinical presentation. Stage of disease (ischemia, infarction of the intestine, peritonitis). Diagnostics (laboratory, angiography, laparoscopy, diagnostic radiology). Treatment: a technique of surgical interventions; types of operations. Intensive therapy.  Defining the concept of peritonitis. Anatomical and physiological information about the peritoneum. Classification of peritonitis (the clinical course, location, nature of effusion, by the nature of the causative agent, on stage). Acute purulent peritonitis. Sources of acute purulent peritonitis. Distribution characteristics of abdominal infection at various acute surgical diseases of the abdominal cavity. Pathological changes in acute purulent peritonitis, pathogenesis. The clinic, diagnosis, differential diagnosis. Modern principles of complex treatment. Features of surgery. Indications for drainage and tamponade, laparostomy, programmed sanitation reoperations. |
| 5. | Herniology | Hernias. Definition. Elements of abdominal hernia. Classification of hernias in origin, localization, course. Etiology and pathogenesis. General symptoms of hernia. Diagnostics. Principles of surgical treatment. The main stages of hernia repair surgery. Complications of hernia. Strangulated hernia. Definition. Types of incarceration. Hernias of the abdomen, the individual species. Umbilical hernia, inguinal hernia. Femoral hernias. Postoperative hernia. Rare hernias. |
| 6. | Coloproctology | Anatomical and physiological information about the rectum. Classification of diseases. Methodology of examination of colorectal patients. The diagnostic value of different methods of investigation (digital examination, sigmoidoscopy, barium enema, biopsy, ultrasound). Hemorrhoids (piles). The fissure of the rectum. Anorectal abscess, acute and chronic. Classification. Diagnosis, treatment. Emergency surgery for colon cancer. The complications (intestinal obstruction, perforation, bleeding). Diagnostics. The choice of surgical treatment method. Features of surgical treatment of colonic malignant obstruction. |
| 7. | Abdominal trauma. | Blunt abdominal trauma. Classification. Diagnostic algorithm. Operative and non-operative treatment. The role of laparoscopy as a diagnostic and therapeutic method; diagnostic laparoscopy. Surgical treatment of injuries of the abdominal cavity. Open abdominal trauma, classification. Diagnostic algorithm. Operative and non-operative treatment. The role of laparoscopy as a diagnostic and therapeutic method; diagnostic laparoscopy. Surgical treatment of injuries of the abdominal cavity. Thoracoabdominal wounds. Features of diagnostics and surgical tactics. |

5.2. Module sections and types of studies

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Name of the course section** | **L** | **CP** | **Self-studies** | **Total hours** |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Introduction. The methodology of diagnostics in surgery | 2 | 10 | 6 | 18 |
| 2 | The most important syndromes in surgery |  |  | 6 | 6 |
| 3 | Operation and postoperative period |  | 5 | 6 | 11 |
| 4 | Diseases of the abdominal organs | 26 | 35 | 30 | 91 |
| 5 | Herniology | 2 | 5 | 4 | 11 |
| 6 | Coloproctology | 2 | 5 | 4 | 11 |
| 7 | Травма живота | 2 | 5 | 6 | 13 |

**6. Interactive forms of studies**

Active and interactive forms of work used in the educational process: individualization and flexibility of elective through outside of class, independent work, surgical simulations, business and role-playing, brainstorming, discussion, case method (analysis of situations), small group work, case studies, psychological and other trainings, creative tasks, case studies with the standards of responses, multimedia training.

Methods based on the latest achievements of science and information technology in education are used in the process of teaching. They are aimed to improve the quality of training through the development of students' creativity and self-reliance. For this purpose are used:  
• interactive forms of holding seminars and clinical dissections  
• training form of practical training.

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Name of the course section** | **Interactive forms of studies** | **Duration**  **(hours)** |
| 1 | Diseases of the abdominal organs | Analysis of specific clinical situations. Presentation and defence of case history | 5 |
| 2 | Herniology | Analysis of specific clinical situations. Curation of patients and discussion | 2 |
| 3 | Abdominal trauma | Clinical round with discussion and analysis of specific clinical situations. | 3 |
| Total (hours) | | | 10 |
| Total (% of in-class learning) | | | 10% |

**7. Extracurricular self-studies of students**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Name of the course section** | **Types of self-studies** | **Forms of control** |
| 1 | Introduction. The methodology of diagnostics in surgery | Preparation of student’ case history. | Check of case history |
| 2 | The most important syndromes in surgery | Preparation of a report about syndromes in surgery | Check of report |
| 3 | Operation and postoperative period | Preparation of a report on treatment of postoerative coplications | Check of report |
| 4 | Diseases of the abdominal organs | The solution of situational tasks | Check of solutions |
| 5 | Herniology | Preparing a multimedia presentation on the modern methods of abdominal plasty in the treatment of external abdominal hernias | View presentation |
| 6 | Coloproctology | Preparing a multimedia presentation on diagnosis and treatment of diseases of the rectum | View presentation |
| 7. | Abdominal Trauma | The solution of situational tasks | Check of solutions |

**8. Forms of control**

8.1. Forms of current control

- Oral: interview report, the defence of the medical case history, clinical examination of the patient, analysis of multimedia presentations and slideshows, assessment of the report;

- Written: test control, essays, summaries, writing abstracts on the topics of missed practical lessons, solving clinical case tasks. Check of case history.

A subject list of abstracts, reports, essays, tests, term papers, test collections and cases are shown at the Appendix №4 to syllabus «Assessment tools».

8.2. Forms of interim attestation: examination

Stages of examination

1 Stage – knowledge control – multiple-choice questions test control;  
2 Stage - certification of practical skills and clinical thinking - credit with the participation of the patient

3. Stage – interview on the ticket and the solution of situational tasks with description of surgical or urological X-ray.

Questions for a multiple-choice questions test and examination are listed at the Appendix №4 to the syllabus «Assessment tools».

**9.Maintenance of the course**

**9.1. The basic literature.**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy, Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

4. Manipal Manual of Surgery/ ed.: K.R Shenoy, A. Nileshwar. -3th. ed.: CBS Publishers & Distributors, 2010. -969 p.: il.

**9.2. Further reading.**

1. Диагностический справочник хирурга. В.Н. Астафуров. - Ростов-н/Д.: Феникс, 2003. - 444 с.
2. Неотложная хирургическая гастроэнтерология : рук. для врачей / Под ред.: А.А. Курыгина и др. - СПб.; М. ; Харьков ; Минск : Питер, 2001. - 480 с. - (Спутник врача).
3. «Острый панкреатит»: руководство для врачей / под редакцией проф. Э.В. Недашковского. – М.: ГЭОТАР – Медиа. – 2009. – 272с.
4. Основы неотложной хирургической помощи : руководство для врачей общей практики: [В 2 т.]. Т.2 : Специальная часть / Сев. гос. мед. ун-т ; Под ред. Р.Н. Калашникова. - 2-е изд., испр. и доп. - Архангельск : СГМУ, 2002. - 279 с.
5. Основы колопроктологии / под ред. Г.И. Воробьева. - 2-е изд., доп. - М. : МИА, 2006. - 430 с.
6. Перитонит : практ. рук. / Рос. ассоц. специалистов по хирург. инфекциям ; под ред.: В. С. Савельев, Б. Р. Гельфанд, М. И. Филимонов. - М. : Литтерра, 2006. - 205 с. - (Практические руководства).
7. Воробьев А.А.Хирургическая анатомия оперированного живота и лапароскопическая хирургия спаек : [Монография] / А.А. Воробьев, А.Г. Бебуришвили. - Волгоград : Издатель, 2001. - 240 с.
8. Горшков С.З. Закрытые повреждения органов брюшной полости и забрюшинного пространства : [монография] / С.З. Горшков. - М. : Медицина, 2005. - 221 с. - (Библиотека практического врача).
9. Дыньков С.М., Поздеев В.Н., Кузнецов А.А., Тодрик А.Г. Лапароскопическая холецистэктомия при остром холецистите. Архангельск. 2000.
10. Дыньков С.М., Тодрик А.Г., Совершаев А.П., Слободянюк Е.В. Эндоскопическая ретроградная холангиопанкреатография. Архангельск. 2001.
11. Рехачев В.П. Острый живот. Архангельск. Издательский центр СГМУ. 2003. – 178 с.
12. Рехачев В.П. Острый аппендицит : моногр. / В. П. Рехачев ; М-во здравоохранения и соц. развития Рос. Федерации, Сев. гос. мед. ун-т. - Архангельск, 2010. - 192,[1] с
13. Рехачев В.П. Послеоперационные вентральные грыжи.Диастазы прямых мышц живота / В.П. Рехачев; Арханг.мед.акад ; Арханг. гос. мед. акад. - Архангельск : Издат. центр АГМА, 1999. – 195 с.
14. Седов В.М. Аппендицит. С-Петербург. Мед. Из-во ООО «ЭЛБИ-С. Пб», 2002.
15. Селезнёв С.А., Шапот Ю.Б., Багненко С.Ф., Курыгин А.А. Травматическая болезнь и её осложнения. С. Пб. Политехника, 2004.
16. Тимербулатов В.М. Хирургия абдоминальных повреждений / В. М. Тимербулатов [и др.]. - М. : МЕДпресс-информ, 2005. - 255 с.
17. Тимошин А.Д. Хирургическое лечение паховых и послеоперационных грыж брюшной стенки : [монография] / А.Д. Тимошин, А.В. Юрасов, А.Л. Шестаков. - М. : Триада-Х, 2003. - 143 с.
18. Федоров И.В., Сигал Е.И., Славин Л.Е. Эндоскопическая хирургия; - М.: ГЭОТАР-МЕД, 2009. - 544 с.
19. Шерлок Ш. Заболевания печени и желчных путей : пер. с англ. / Ш. Шерлок, Дж. Дули ; ред. З.Г. Апросина. - М. : Гэотар-Мед., 2002. - 859 с.
20. Яицкий Н. А. Седов В.М. Сопия Р.А. Острый панкреатит.. - М.: МЕДпресс-информ, 2003. - 224 с
21. Ярема И.В. Хирургия язвенной болезни желудка : рук. для врачей / И.В. Ярема, Б.М. Уртаев, Л.А. Ковальчук. - М. : Медицина, 2004. – 303 с.

**9.3. List of Internet resources required for mastering of the discipline (module)**

International databases

|  |  |  |
| --- | --- | --- |
| 1 | Database «Scopus» | http://www.scopus.com/ |
| 2 | Electronic archive of magazines publishing SAGE PUBLICATIONS | www.sagepub.com |
| 3 | Electronic archive of magazines publishing IOP Publishing | http://iopscience.iop.org/jornals?type=archive |
| 4 | Electronic archive of magazines publishing OXFORD UNIVERSITY PRESS | www.oxfordjournals.org/ |
| 5 | Electronic archive of magazine SCIENCE publishing AAAS | www.sciencemag.org. |
| 6 | Electronic archive of magazines publishing ROYAL SOCIETY OF CHEMISTRY | www.rsc.org/ |
| 7 | Electronic archive of magazines publishing PubMed Central | http://www.ncbi.nlm.nih.gov/pubmed |

**University library**

|  |  |  |
| --- | --- | --- |
| 1 | Electronic library NSMU | http://lib.nsmu.ru/lib/ |

**9.4 List of information technologies used in the educational process within the discipline (module), including software and referral systems**

**10. Required facilities and equipment**

**Teaching materials are used in the process of teaching the following:**

The educational process is carried out in the classrooms of the department:

- A conference hall, which is used for conferences, workshops, lectures.

- Training rooms for practical training in surgical diseases.

- Training of the operating room is used for operation day

Wards in surgical departments

- Inspections are carried out in the wards of patients during clinical rounds of staff of the Department

- Supervision carried out by students

- Patients demonstration in wards

Surgical wards are used for training, demonstration of patients, manipulation, dressings The training facilities are used : multimedia production, TV, VCR, video library with movies available:

- The history of the Department of Surgery

- Diagnostic and therapeutic laparoscopy in emergency surgery

- Endosurgical intervention in acute diseases of the abdominal cavity

- Laparoscopic cholecystectomy

- Prevention of injuries of the extrahepatic biliary tract in laparoscopic cholecystectomy

- Surgical treatment of hernias of the anterior abdominal wall using synthetic implants

- Surgical treatment of postoperative ventral hernias using skin autograft

- Anesthesia in endosurgery

- Videoscopic retroperitoneal sympathectomy

- Longo operation in the treatment of hemorrhoids, prolapse and rectocele

- Puncture of abdominal cavity under ultrasound and CT navigation

- Thoracoscopic subphrenic vagotomy

In lectures and practical exercises used multimedia projector, there are multimedia presentations on all themes of the program.

The department has an archive of radiographs to demonstrate radiographic evidence of the most common surgical diseases

At the workshops practiced demonstration of patients, students participate in the dressing room, procedural and operational.

**11. Student evaluation of the course content and quality of academic activities**

**Approximate evaluation form for the course**

**«Faculty Surgery and Urology»**

(anonymous)

You are kindly requested to fill in evaluation form on the completed course «Faculty Surgery and Urology». Summarized answers will be used for improving the course in future. For each question put the appropriate mark on a scale from 1 to 10 grades (circle out the grade you select). If necessary, enter your comments.

1. To what extent are you satisfied with the content of the course as a whole?

1 2 3 4 5 6 7 8 9 10

Commentary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. To what extent are you satisfied with the overall style of teaching?

1 2 3 4 5 6 7 8 9 10

Commentary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. How do you assess the quality of preparation of the offered teaching materials?

1 2 3 4 5 6 7 8 9 10

Commentary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. To what extent are you satisfied with the used methods of active learning (process modeling, cases, interactive lectures, etc.)?

1 2 3 4 5 6 7 8 9 10

Commentary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. What course section do you find the most useful and valuable for the purposes of further studies and/or subsequent use in practice?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. What would you offer to change in methodology and contents of the course in order to improve it?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

THANK YOU!

Author

|  |  |  |
| --- | --- | --- |
| Current position | Last name, initials | Signature |
| Associate professor of Department of Surgery | D.V. Mizgirev |  |
|  |  |  |

Reviewer (reviewers):

|  |  |  |  |
| --- | --- | --- | --- |
| Place of work | Current position | Last name, initials | Signature |
|  |  |  |  |
|  |  |  |  |

Appendix №1 to the syllabus

**Thematic plan of lectures**

Course – Faculty Surgery, Urology

Module Faculty Surgery

Field of training – 31.05.01 «General medicine»

Semester – 7, 8

Year – 4th

|  |  |  |
| --- | --- | --- |
| № of lecture | Topic of lecture | Number of hours |
| Semester 7 | |  |
| 1 | Introduction Diagnostics of surgical diseases. | 2 |
| 2 | Acute appendicitis | 2 |
| 3 | Complications of acute appendicitis | 2 |
| 4 | Cholecystitis | 2 |
| 5 | Diseases of the liver | 2 |
| 6 | Acute pancreatitis | 2 |
| 7 | Obstructive jaundice | 2 |
| 8 | Complications of peptic ulcer disease | 2 |
| 9 | Gastrointestinal bleeding | 2 |
| 10 | Abdominal hernias | 2 |
|  | |  |
| Semester 8 | |  |
| 11 | Intestinal obstruction | 2 |
| 12 | Peritoneal adhesions | 2 |
| 13 | Mesenteric ischemia | 2 |
| 14 | Peritonitis | 2 |
| 15 | Colorectal disorders | 2 |
| 16 | Abdominal trauma | 2 |
| Total | | 32 |

Reviewed at the meeting of the department of Surgery

“\_\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_1016

Protocol № \_\_\_\_\_\_\_\_\_\_

Head of the department Duberman B.L. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Thematic plan of practicals**

Course – Faculty Surgery, Urology

Module Faculty Surgery

Field of training – 31.05.01 «General medicine»

Semester – 7, 8

Year – 4th

|  |  |  |
| --- | --- | --- |
| № of practical | Topic of practical | Number of hours |
| Semester 7 | |  |
| 1 | Introduction. Curation of patients. | 5 |
| 2 | Acute appendicitis | 5 |
| 3 | Gallstone disease. Cholecystitis | 5 |
| 4 | Diseases of the liver | 5 |
| 5 | Acute pancreatitis | 5 |
| 6 | Complications of peptic ulcer disease | 5 |
| 7 | Credit. Interview on case history | 5 |
|  | |  |
| Semester 8 | |  |
| 8 | Abdominal hernias | 5 |
| 9 | Intestinal obstruction | 5 |
| 10 | Colorectal disorders | 5 |
| 11 | Peritonitis | 5 |
| 12 | Operation day | 5 |
| 13 | Abdominal trauma. | 5 |
| 14 | Credit with participation of the patient | 5 |
|  | |  |
| Total | | 100 |

Reviewed at the meeting of the department

“\_\_\_\_\_”\_\_\_\_\_\_\_\_\_\_\_\_\_\_1016

Protocol № \_\_\_

Head of the department Duberman B.L.

Appendix № 3 to the syllabus

MINISTRY OF HEALTHCARE OF THE RUSSIAN FEDERATION

**State Government-Funded Educational Institution of Higher Professional Education**

**«NORTHERN STATE MEDICAL UNIVERSITY»**

**of Ministry of Healthcare of the Russian Federation**

**METHODOLOGICAL GUIDELINES FOR STUDENTS**

**OF THE COURSE**

**Faculty Surgery**

2016

**Topic 1. Introduction. Curation of patients.**

**1. Aims of the class:**

To teach students to perform clinical examination of the surgical patient, to determine the additional investigation plan, to apply the differential diagnosis as a method of clinical diagnosis, prescribe treatment to the patient.  
  
Objectives: The student should know:

- The concept of diagnosis

- The existing methods of diagnosis in surgical practice

- Types of diagnoses

- Methods of diagnosis

- Indications for conduction of differential diagnosis

- Principles of differential diagnosis

- A list of the most common diseases in surgical practice

- Methods to identify the main pathological features of acute surgical diseases

The student should be able to:

- To collect complaints, anamnesis

- To perform physical examination of the patient

- To combine data obtained in symptoms and syndromes, distinguish diseases with similar clinical features

- To carry out a comparison and analysis of the data, a differential diagnosis of acute surgical diseases of the abdominal cavity

- To fill in the medical case history, outpatient chart

- Formulate full clinical diagnosis, to justify it on the basis of the differential diagnosis.

**2. Definitions:**

History, preliminary diagnosis, differential diagnosis, clinical diagnosis, forensic medical diagnosis, post-mortem examination diagnosis, the principle of significant difference, exclusion principle by contrast, the principle of mismatch of features

**3. Questions to the lesson**

- Definition of diagnosis

- Principles of diagnostics, treatment and prevention of surgical diseases

- What are the main types of method of construction of diagnosis

- List the main methods of examination of patients

- Define the role of biochemical tests in the diagnosis and treatment of patients with acute surgical pathology

**4. Questions for self-control**

- Explain the structure of the clinical diagnosis

- What is the role of differential diagnosis

- The role of the laboratory data before surgery

- The value of laboratory tests in the treatment of patients with acute surgical pathology

- The role of instrumental diagnostic methods in clinical diagnosis

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

1. Curation of patient with preparation of case history

2. Essay “Main syndromes in abdominal surgery”

**Topic 8. Acute appendicitis**

**1. Aims of the class:**

To study the causes and pathogenesis of appendicitis, the clinical features and complications, the main stages of operation and postoperative management of patients with acute appendicitis.

**Objectives**

The student should know:

- Anatomy of ileocecal angle

- Etiology and pathogenesis of appendicitis

- Classification of acute appendicitis

- Clinic, diagnostics and basic principles of treatment of acute appendicitis

- Complications of acute appendicitis

The student should be able to:

- Identify the key complaints and carefully collect anamnesis.

- Right to conduct an objective investigation.

- Outline a plan of inspection of patient.

- To diagnose appendicitis

- Create a plan of treatment of patients with acute appendicitis.

- To conduct differential diagnostics of acute appendicitis with other diseases of the abdominal cavity

- explain stages of surgical intervention in various forms of acute appendicitis

- Learn the peculiarities of preoperative and postoperative patients regime.

**2. Definitions:**

- Appendix, ileocecal angle, catarrhal (simple) appendicitis, phlegmonous appendicitis, gangrenous appendicitis, perforation of the appendix, the appendix empyema, retrocaecal location, retroperitoneal location of the appendix, appendicular infiltrate (mass), appendiceal abscess, abscess of the Douglas pouch (cul-de-sac), appendectomy, retrograde appendectomy, pylephlebitis.

**3. Questions to the lesson**

-Anatomy and physiological function of cecum and vermiform appendix.

-Modern theories about the etiology and pathogenesis of acute appendicitis.

- Classification of acute appendicitis and its pathological forms.

- Features of clinical picture of acute appendicitis, depending on the pathological forms of it.

- Features of clinical picture of the disease, depending on the options of the location of the appendix.

- The clinical course and differential diagnosis of the disease in children, women, pregnant women and the elderly.

- Diagnostic complex of examination of patients.

- Differential diagnosis of acute appendicitis and other diseases of the abdominal cavity and retroperitoneal space

- Preparation of patients for surgery and postoperative care

- Stages of open and laparoscopic appendectomy

- Surgical tactics in acute appendicitis and its features when wasps complications forms

- The clinic, diagnosis and treatment of acute appendicitis complications

- The clinic, diagnosis, differential diagnosis of chronic appendicitis; indications and contraindications for surgery.

**4. Questions for self-control**

1. List the major positions (locations) of the appendix.

2. What are the main theories explaining the development of acute appendicitis.

3. What is the classification of acute appendicitis.

4. Describe the pathologic changes in the appendix in its inflammation.

5. Describe the clinical picture of acute appendicitis and name it pathognomonic syndromes.

6. Diagnostic program of acute appendicitis.

7. Differential diagnosis of acute appendicitis.

8. What are the clinical features of acute appendicitis in children.

9. What are the clinical features of acute appendicitis in the elderly.

10. What are the clinical features of acute appendicitis in pregnant women.

11. What are the complications of acute appendicitis.

12. The clinic, diagnosis and treatment of appendicular infiltrates and abscesses.

13. The clinic, diagnosis and treatment pileflebitis.

14. Features of the postoperative management of patients with uncomplicated and destructive forms of acute appendicitis.

15. Postoperative complications, diagnosis and treatment.

16. The clinic, diagnosis and treatment of chronic appendicitis.

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Self- solution of clinical situational tasks.

**Topic 9. Acute Cholecystitis. Gallstone disease.**

**1. Aims of the class:**

to learn etiology, clinical diagnostics and principles of treatment of acute cholecystitis.

**Objectives**

The student should know:

- Anatomy of the gallbladder and bile ducts

- Etiology and pathogenesis of acute cholecystitis

- Classification and clinic of acute cholecystitis

- Conservative and surgical methods of treatment of acute cholecystitis

- Complications of acute cholecystitis

- Treatment of complications of acute cholecystitis

The student should be able to:

- Carry out a clinical examination of patients with acute cholecystitis

- Perform differential diagnosis of acute cholecystitis and other diseases

- To conduct preoperative preparation of patients with acute cholecystitis

- Prescribe a treatment plan in patients with acute cholecystitis in postoperative period

**2. Definitions:**

- Acute cholecystitis, catarrhal cholecystitis, phlegmonous cholecystitis, gangrenous cholecystitis, gallbladder hydrops, Kehr sign, Mussi sign, Ortner sign, Murphy’ sign, Courvoisier sign, cholecystectomy, choledocholithiasis, perivesical abscess, jaundice, cholangiography, duodenoscopy, ERCP, fistulography, endoUS

- Intraoperative cholangiography, debitmanomety, Kehr’ drain, Halsted drain, PTBD

**3. Questions to the lesson**

1. Anatomy and physiology of the gallbladder and biliary tract

2. Etiology and pathogenesis of cholelithiasis

3. Classification of acute cholecystitis

4. Clinic of acute cholecystitis

5. Differential diagnosis of acute cholecystitis and other diseases of the abdominal and thoracic cavities

6. Laboratory and instrumental methods of diagnosis of acute cholecystitis

7. Conservative treatment of acute cholecystitis

8. Indications for urgent cholecystectomy, the main stages of operation

9. Complications of acute cholecystitis

10. Symptoms of choledocholithiasis

11. Diagnosis and treatment of the choledocholithiasis

13. Methods of bile ducts investigation

14. Rehabilitation of patients after cholecystectomy

**4. Questions for self-control**

1. What is normal width of the common bile duct?

2. Where the common bile duct flows into?

3. What is the role of bile in digestion?

4. Name the mechanism of development of cholelithiasis?

5. What is the clinic of acute cholecystitis?

6. What diseases should be differentiated from acute cholecystitis?

7. Name the instrumental methods of diagnostics of acute cholecystitis?

8. What are the operative methods of treatment of acute cholecystitis?

9. What are the advantages of laparoscopic cholecystectomy instead of traditional?

10. What is the conservative treatment of acute cholecystitis?

11. List the complications of acute cholecystitis?

12. What methods of biliary tract examination do you know?

13. What is the pathogenesis of jaundice when choledocholithiasis occur?

14. Name examination and treatment algorithm for patients with holedoholitiasis?

15. What kind of diet should be followed by patients after cholecystectomy?

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Self- solution of clinical situational tasks.

**Topic 10. Diseases of the liver**

**1. Aims of the class:**

learn the basics of liver diseases requiring surgical intervention and treatment in hospital.

**Objectives**

The student should know:

- Anatomy of the liver

- Peculiarities of blood supply to the liver

- Liver function

- Etiology and pathogenesis of the liver abscess

- Etiology and pathogenesis and signs of liver cysts

- The main methods of diagnosis of liver diseases

- Types of surgery on the liver

The student should be able to:

- Carry out a clinical examination of patients with liver diseases

- A differential diagnosis of liver volume bulks

- To conduct preoperative preparation of patients with liver diseases

- Prescribe a treatment plan in patients with liver pathology

**2. Definitions:**

Parasitic liver cysts, hydatid cyst, alveococcosis, liver abscess, liver cancer, liver cirrhosis, portal hypertension, liver metastasis, ascites, "Caput Medusae".

**3. Questions to the lesson**

1. Anatomy and physiology of the liver

2. Etiology and pathogenesis of liver abscesses

3. Etiology and pathogenesis of parasitic and non-parasitic liver cysts

4. Clinic of Liver Cancer

5. Clinic of liver abscess

6. Clinical syndrome of portal hypertension

7. Methods of diagnosis of portal hypertension syndrome

8. Methods of treatment of portal hypertension

9. Forms of operation in focal lesions of the liver

10. Features of management of patients after liver resection

**4. Questions for self-control**

1. Name liver segments

2. How does the the liver blood supply functioning?

3. What are the signs of liver abscess?

4. List the parasitic liver diseases

5. What specific treatment is carried out at hydatid cyst?

6. What is the role of minimally invasive interventions in focal lesions of the liver?

7. What are the indications for liver resection?

8. What are the main clinical signs of portal hypertension syndrome

9. What is the treatment of tension ascites?

10. What is the conservative treatment of portal hypertension syndrome?

11. Make a plan for postoperative management of the patient after liver resection

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**Topic 11. Acute pancreatitis**

**1. Aims of the class:**

To learn the causes and pathogenesis of acute pancreatitis, signs, depending on the type and complications, diagnostic methods and treatment guidelines.

**Objectives**

The student should know:

- Anatomy and physiology of the pancreas

- Etiology and pathogenesis of acute pancreatitis

- Classification of acute pancreatitis

- Clinic and diagnosis of acute pancreatitis

- Conservative and surgical methods of treatment of acute pancreatitis

- Complications of acute pancreatitis

- Rehabilitation of patients with acute pancreatitis

The student should be able to:

- Carry out a clinical examination of the patient with acute pancreatitis

- Appoint and interpret laboratory and instrumental methods of diagnosis

- To provide emergency care to patients with acute pancreatitis

- Conduct conservative treatment of patients with acute pancreatitis

- To conduct preoperative preparation and postoperative management of patients with acute pancreatitis

**2. Definitions:**

Pancreatitis, edematous form of pancreatitis, hemorrhagic pancreatic necrosis, fat pancreatic necrosis, "evasion of enzymes in the blood," autolysis, hyperenzymemia, biliary pancreatitis, infected pancreatic necrosis, parapancreatitis, retroperitoneal abscess, pancreatic cysts, peritoneal dialysis, detoxication, necrectomy, resection of the pancreas, percutaneous puncture.

**3. Questions to the lesson**

- Etiology and pathogenesis of acute pancreatitis

- Modern classification of acute pancreatitis

- Signs of pancreatitis

- Complications of acute pancreatitis

- Laboratory and instrumental methods of diagnosis

- Principles of selection of optimal diagnostic and treatment tactics in biliary and alcoholic pancreatitis

- Complex intensive care of acute destructive pancreatitis;

- Indications for surgical treatment of acute pancreatitis

- Types of minimally invasive interventions for cysts and purulent complications of acute pancreatitis

**4. Questions for self-control**

1. Definition of acute pancreatitis

2. Classification of acute pancreatitis. Current concepts of the pathogenesis

3. Signs of biliary and alcoholic pancreatitis

4. Therapeutic and diagnostic tactics in different forms of acute pancreatitis

5. Conservative treatment of acute pancreatitis depending on its type

6. Indications for surgery.

7. Minimally invasive interventions in septic complications of acute pancreatitis

8. The ultrasound and CT scan - a picture of destruction of the pancreas

9. Features of the postoperative management of patients with acute pancreatitis

10. Detoxication methods in acute pancreatitis

11. The role of peritoneal dialysis in the treatment of pancreatic necrosis

12. The principles of rehabilitation of patients with destructive forms of acute pancreatitis

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Self-solution of clinical tasks.

Preparation of PPT presentation “Complications of necrotizing pancreatitis”

**Topic 12. Complications of peptic ulcer disease.**

**1. Aims of the class:**

To learn the signs, diagnosis and surgical treatment of complications of peptic ulcer disease.

**Objectives**

The student should know:

- Anatomy and physiology of the stomach and duodenum

- Pathogenesis, signs, diagnosis and principles of treatment of perforated gastric ulcer and duodenal ulcer

- The etiology of ulcerative and non-ulcerative bleeding of the gastrointestinal tractus, emergency care, diagnostic and treatment methods for bleeding in different parts of the gastrointestinal tract

- Signs, diagnosis and principles of treatment of pyloroduodenal stenosis

- The concept of penetration. Methods of diagnosis and treatment of penetrating ulcers

- The concept of malignancy, diagnostic methods and basic principles of treatment.

The student should be able to:

- Carry out a clinical examination of patients with a suspected perforated gastric ulcer and duodenal ulcer

- Examine the patient with a suspected perforated ulcer

- Interpret the abdominal radiographs

- To provide emergency care to patients with gastrointestinal bleeding

- To appoint surveys to clarify the source of bleeding and the severity of blood loss

- To conduct preoperative preparation of patients with stenosis of gastric outlet

**2. Definitions:**

peptic ulcer, ulcer perforation, atypical perforation, board-like belly, a symptom of "sickle", gastro-intestinal bleeding, absence of liver dullness, Gordon-Taylor method, melena, "coffee ground", Mallory-Weiss syndrome, varicose veins of the esophagus, Blakemore tube, Crohn's disease, raspberry jelly, hemorrhoids, hemostatic therapy, pyloroduodenal stenosis, obstruction of the gastric outlet, vomiting of yesterday food, X-ray of the stomach with barium meal, fibrogastroduodenoscopy, malignant ulcer, penetration of ulcers, gastric resection, endoscopic hemostasis

**3. Questions to the lesson**

- Concept, pathogenesis and signs of typical perforation of gastric ulcer and duodenal ulcer

- Pathogenesis, signs of atypical perforation of ulcer

- Methods of diagnosis of perforated ulcer

- Surgical treatment of perforated ulcer

- Postoperative management and rehabilitation of patients after surgical treatment of perforated ulcer

- Etiology, pathogenesis and clinical picture of gastrointestinal bleeding, depending on the source

- Laboratory and instrumental methods of diagnosis of gastrointestinal bleeding

- Conservative, endoscopic and surgical methods of hemostasis

- The grade of endoscopic evaluation of hemostasis of gastrointestinal bleeding by Forrest classification

- Pathogenesis, clinical features, diagnosis and treatment of pyloroduodenal stenosis

- The concept of penetration, its types

- Principles of treatment of penetrating ulcers

- The concept of malignancy, diagnostic methods and treatment of malignant gastric ulcers

**4. Questions for self-control**

1. What are the clinical signs typical for the perforation of the ulcer?

2. What is atypical perforation? What are the clinical features in atypical perforation?

3. What characterizes radiological signs of perforation of the ulcer?

4. With what diseases it is necessary to differentiate with the perforation of the ulcer?

5. What is the surgical treatment of perforated ulcer?

6. What is included in anti-ulcer therapy?

7. What is the rehabilitation of patients after gastrectomy?

8. The signs, characterizing bleeding from varicose veins of the esophagus.

9. What is the Mallory-Weiss syndrome?

10. List the main clinical symptoms of bleeding from ulcers

11. What characterizes intestinal bleeding?

12. What are the indicators of hemodynamics and blood countdepending on the grade of blood loss?

13. What are the indicators of endoscopic hemostasis by Forrest classification?

14. What is included in the conservative treatment of gastrointestinal bleeding?

15. What are the indications for surgical treatment of gastrointestinal bleeding?

16. What are the signs of stenosis of gastric outlet, depending on its degree?

17. What are the radiological signs of decompensated stenosis of gastric outlet?

18. What is the preoperative preparation of patients with stenosis of gastric outlet?

19. What is malignancy ulcer?

20. What tactics executed in malignancy ulcers?

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**Topic 13. Credit. Interview on case history.**

Class is conducted in an interactive form.

Each student of group reports about supervised patient (complaints, medical history, results of physical examination and additional diagnostic techniques). Sets the clinical diagnosis and determine the patient's treatment plan. Classmates ask questions on the differential diagnosis, on the interpretation of laboratory parameters, the pharmacological action of drugs.

Together with the students teacher evaluates the student's report, rule-of answers to the questions, define the level of clinical thinking, knowledge of the differential diagnosis, laboratory and instrumental diagnostic methods, the adequacy of the designated medical treatment, knowledge of the basic principles of surgery and postoperative care. Students from the group expressing their opinions about the level of the report, noted its positive aspects and disadvantages. Teacher also characterizes the report, indicates errors in supervision and writing case history.

After discussion with students teacher determines the final evaluation of the students.

**1. Aims of the class:**

exercise control of knowledge and skills acquired by studentsduring training module on Surgical diseases.

**Objectives**

Student should know:

- The content of the sessions held and lectures given.

- The principles of diagnosis and treatment of acute surgical diseases of abdominal cavity

Student should be able to:

- Identify the key features of acute and chronic surgical diseases

- Draw up a plan of patients survey

- To conduct differential diagnostics of acute abdominal diseases

- Put and prove the clinical diagnosis in accordance with the existing classifications

- Choose the optimal treatment of the patient with surgical pathology

- Know the stages of surgery for various diseases

- To know and be able to conduct preoperative preparation, know the features of the treatment of patients in the postoperative period

- To substantiate the data of the anamnesis, objective findings and additional studies set out in the student's medical history

- Justify the plan of inspection and treatment supervised patient

**2. The algorithm of the class:**

2.1. The interview with the teacher:

• Protection of medical history

• Answers to the teacher's questions about the patient under supervision (estimated anamnesis, objective examination, clinical diagnosis, differential diagnosis, tactics, probable complications)

2.1. Brief description of the picture on the audit of medical records in a group of students by the teacher, a reflection of the most common errors.

2.4. Summary, the feedback (students' opinions about the passed module, questionnaire, suggestions to improve the module).

**Topic 14. Abdominal hernias**

**1. Aims of the class:**

To study the pathogenesis, classification, basic principles of diagnosis and treatment of hernias of the anterior abdominal wall. Learn to diagnose and choose the tactics of treatment at a strangulated hernia.

**Objectives**

The student should know:

- The definition of the hernia, the etiology and pathogenesis of hernia

- Classification of hernias

- Signs and diagnosis of complicated and uncomplicated hernias

- The basic principles of the surgical treatment of hernias of various localization

The student should be able to:

- Diagnose uncomplicated hernia of the anterior abdominal wall and its complications

- To provide emergency care in strangulated hernia

- Conduct preparation and examination of patients for the planned and urgent herniotomy and plasty

- To carry out the rehabilitation and care of patients with hernias after surgery

**2. Definitions:**

Herniology, hernia, the hernial ring, hernial sac, hernial content, cough-push symptom, inguinal hernia, umbilical hernia, femoral hernia, epigastric hernia, postoperative ventral hernia, sliding hernia, irreducible hernia, strangulated hernia, fecal incarceration, retrograde incarceration, Richter’ hernia, hernial water, bowel necrosis, hernioplasty, implants, skin flap, autoplasty, alloplasty, xenoplasty, Littre’ hernia, Maydl’ hernia.

**3. Questions to the lesson**

- The main stages of development of herniology as a science

- Definition and parts of hernia.

- Predisposing factors and producing factors of hernias appearance

- Common clinical signs of herniation

- Classification of simple hernias (Nyhus)

- Indications and contraindications to the planned surgical treatment of abdominal hernias

- Preoperative preparation of patients with hernias, anesthesia

- Types of plasty in inguinal hernia (local tissue: Bassini method, Postempsky-Krymov method, synthetic implants: a technique of Liechtenstein)

- Anatomy of the femoral canal, the differential diagnosis of femoral hernia

- Types of plasty in femoral hernia (method of Bassini, Rougie)

- Anatomy of the umbilical region, the linea alba, preoperative examination for these types of hernias, the types of surgical procedures for various types of hernias, depending on age, location

- Classification of postoperative ventral hernias depending on type and size of the hernia

- The causes of postoperative ventral hernias

- Features of preoperative preparation of patients with postoperative ventral hernias

- Methods of alloplasty in postoperative ventral hernias: corrective and reconstructive surgery

- The concept of diastasis, types, methods of plasty

- Classification and types of incarceration (internal, external, complete, fecal, elastic, retrograde)

- Major differences of strangulated and irreducible hernia

- Features of surgical tactics in strangulated hernia

- The principles of determining the viability of colon, intestine resuscitation techniques, indications and resection

- Features of the postoperative management of patients with hernias of various localization

- The risks and complications of hernia repair during surgery and in the postoperative period

**4. Questions for self-control**

- Predisposing and producing factors of development of abdominal hernias

- The main clinical manifestations of hernia

- Inguinal canal anatomy, signs of inguinal hernia, plasty (local tissue and using synthetic implants).

- Femoral canal anatomy, signs, plasty types in femoral hernia

- Anatomy of the umbilical area, signs, the types of plasty in umbilical hernia

- Postoperative ventral hernia, causes, signs, plastic surgery in postoperative ventral hernias

- Features of preoperative preparation, depending on the type of hernia, age and comorbidity

- Types of diastasis, methods of surgical treatment

- Types of incarceration, examination of patients with strangulated hernia

- Features of surgical tactics in strangulated hernia

- Definition of organ viability, indications and extent of gut resection

- Features of the postoperative period after hernioplasty

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Preparation of PPT presentation about modern methods of hernioplasty

**Topic 15. Intestinal obstruction**

**1. Aims of the class:**

To learn the pathogenesis, classification, signs and treatment of various forms of acute intestinal obstruction. Learn to diagnose and determine the tactics in acute intestinal obstruction.

**Objectives**

The student should know:

- Anatomy and physiology of the intestine

- Etiology and pathogenesis of acute intestinal obstruction (AIO)

- Classification of AIO

- Signs, diagnosis and treatment principles in AIO, depending on the type of obstruction.

- Rehabilitation of patients after intestinal resection and colostomy

The student should be able to:

- Perform clinical examination of patients with intestinal obstruction and to fill medical documentation

- To administer and to interpret the data of instrumental methods of diagnosis

- To provide emergency care to patients with acute intestinal obstruction

- Conduct conservative treatment in patients with acute intestinal obstruction

- To conduct preoperative preparation and postoperative management of patients with AIO

- Do the rehabilitation of patients with colostomy and adhesive disease of the abdominal cavity

**2. Definitions:**

ileus, upper intestinal obstruction, lower intestinal obstruction, obstructive ileus, strangulation ileus, “silent abdomen”, splashing sound, Kloyber cups, gas-fluid levels, bezoar, intussusception, paralytic ileus, spastic ileus, bowel necrosis, bowel intubation, colostomy, dolichosigma

**3. Questions to the lesson**

1. Topography of the abdominal cavity.

2. Etiology and pathogenesis of acute intestinal obstruction.

3. Classification of acute intestinal obstruction.

4. Clinical symptoms of upper and lower acute intestinal obstruction.

5. Clinical features of obstructive and strangulated intestinal obstruction

6. Differential diagnosis of AIO and other acute diseases of the abdominal cavity

7. Methods of instrumental diagnostics of acute intestinal obstruction: X-ray and ultrasound

8. The basic principles of conservative treatment.

9. Indications and basic principles of surgical treatment of acute intestinal obstruction

10. Postoperative management of patients after colon resection and colostomy

11. Rehabilitation of patients with acute intestinal obstruction and abdominal adhesive disease.

**4. Questions for self-control**

1. Tell the anatomy and physiology of the small and large intestine.

2. What are the main causes of intestinal obstruction

3. What is the classification of acute intestinal obstruction

4. Conduct a differential diagnosis of strangulation and simple obstruction

5. Clinical features of small intestinal and colonic obstruction

6. List the phases of development of acute intestinal obstruction, indicating the main pathogenetic moments

7. Instrumental methods of diagnosis of acute intestinal obstruction

8. Management of adhesive intestinal obstruction

9. Surgical management of strangulation

10. Surgical management of obstructive ileus

11. Surgical management of paralytic ileus

12. Surgical management of intussusception

13. The principles of surgical intervention in AIO

14. The role nasointestinal intubation of the small intestine in the treatment of AIO

15. Features of the postoperative management of patients with acute intestinal obstruction

16. Features of treatment of patients with stoma, colostomy care

17. The principles of rehabilitation of patients with adhesive disease of the abdominal cavity

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Self-solution of clinical tasks.

**Topic 16. Colorectal disorders**

**1. Aims of the class:**

Learn the most common diseases of the colon and rectum requiring surgical treatment in hospital.

**Objectives**

The student should know:

- Anatomy and physiology of the colon

- Methods of colon examination

- Anomalies of the colon: Hirschsprung's disease, idiopathic megacolon

- Signs, diagnosis and principles of treatment of inflammatory bowel disease: ulcerative colitis, Crohn's disease

- Signs and complications of diverticular disease of the colon

- Clinical features of benign tumors of the colon, their diagnosis and treatment

- Pre-cancerous colon diseases

- Classification, signs, methods of diagnosis and treatment of colonic cancer

- Anatomyof rectum

- Methods for diagnosing diseases of the colon

- Etiology, pathogenesis, signs and principles of treatment of hemorrhoids, anal fissures, anorectal abscess and fistula

- Signs, methods of diagnosis and treatment of colorectal cancer

The student should be able to:

- Collect data about the history and perform primary examination of the patient with diseases of the colon and rectum

- To carry out a rectal examination of the patient

- Do an enema

- Appoint the examination of the patient with diseases of the colon and rectum

- Interpret data of X-ray examination

- Perform preoperative preparation of patients with diseases of colon and rectum

- Appoint conservative therapy for inflammatory diseases of the colon and rectum

- To take care of colostomy

**2. Definitions:**

colon, anoscopy, sigmoidoscopy, colonoscopy, barium enema, the reaction of Gregersen, Hirschsprung's disease, diverticulosis, polyps, Crohn's disease, ulcerative colitis, colon cancer, hemorrhoids (piles), anal fissure, anorectal abscess, a symptom of "cobblestones", hemicolectomy, Hartmann operation.

**3. Questions to the lesson**

1. Anatomy and physiology of the colon and rectum

2. X-ray methods of diagnosis of colon diseases, special preparations for the survey

3. Endoscopic diagnosis of diseases of the colon, features of preparation for examination

4. Congenital anomalies of the colon: etiology, pathogenesis, clinical features, treatment

5. Inflammatory diseases of the colon: ulcerative colitis, Crohn's disease

6. Diverticulosis of colon: etiology, pathogenesis, clinical features, complications, principles of treatment

7. Benign tumors of the colon: etiology, clinical features, diagnosis and treatment methods

8. Precancerous lesions and cancer of the colon: etiology, pathogenesis, classification, diagnostic methods and treatment principles

9. Differences of clinical course of cancer of left and right half of colon

10. Etiology and pathogenesis of hemorrhoids, classification, clinic, its complications, methods of diagnosis and treatment

11. Paraproctitis: etiology, pathogenesis, classification, surgical treatment principles

12. The canal fissure: etiology, pathogenesis, clinical manifestations, diagnosis, treatment

13. Precancerous lesions and cancer of the rectum: etiology, pathogenesis, classification, diagnosis and treatment methods

14. Rehabilitation of patients after surgery for colon and rectum

**4. Questions for self-control**

1. What is the function of the colon?

2. What is Hirschsprung's disease?

3. What complications can occur with diverticulosis of the colon?

4. What kind of conservative therapies used for the treatment of Crohn's disease?

5. What are the precancerous diseases of the colon, that you know?

6. What makes the cancer clinic of the right half of the colon?

7. What does the term "abnormal discharge syndrome"?

8. How to conduct preparation for the barium enema?

9. What is the Hartmann operation?

10. What is meant by the principle of ablasty?

11. What is the purpose of radiation therapy for patients with colon cancer?

12. What is isolated rectum?

13. What methods are used to examine the rectum?

14. Speak about methods of conservative therapy in thrombosis of piles?

15. What is the anal fissure?

16. Name the pathogenesis of abscess?

16. Name the classification of anorectal abscess?

17. What is the operation of Bobrova-Ryzhikh (Gabriel’)?

18. What are precancerous diseases of the rectum?

19. What characterizes Stage 3 of colonic cancer?

20. What are the operations that are performed for rectal cancer?

**5. Literature**

**6. Extracurricular self-studies of students**

Topics for preparation of oral reports with PPT presentation :

1. Preoperative and postoperative management of patients undergoing surgery for colon and rectum diseases

2. X-ray picture in inflammatory bowel disease

3. Ischemic colitis. Signs, diagnostics, treatment.

4. Rehabilitation of patients after operations on the colon and rectum

**Topic 17. Peritonitis**

**1. Aims of the class:**

To slearn the pathogenesis, modern classification, the basic principles of the diagnosis and treatment of acute peritonitis.

**Objectives**

The student should know:

- Topography anatomy of the abdominal cavity

- The physiology and function of the peritoneum

- Etiology and pathogenesis of peritonitis

- Classification of peritonitis

- Signs and diagnostics of acute peritonitis

- Surgical treatment principles

- Preoperative preparation and postoperative management of patients with acute peritonitis

The student should be able to:

- Identify the key complaints and carefully collect anamnesis of patients with pathology studied.

- To conduct an objective investigation.

- Outline a plan of survey.

- Diagnose probable peritonitis source.

- Create a plan of treatment of patients with peritonitis.

- Conduct a differential diagnosis with other diseases of the abdominal cavity

- To assess the condition of the patient on the scale APACHE 2 and SOFA

- The stages of surgery in peritonitis

- Find the indications for abdominal programmed sanations

**2. Definitions:**

The peritoneum, peritonitis, exudate, primary peritonitis, secondary peritonitis, tertiary peritonitis, localized peritonitis, diffuse peritonitis, serous peritonitis, hemorrhagic peritonitis, fibrinous peritonitis, purulent peritonitis, fecal peritonitis, bile peritonitis, hemorrhagic peritonitis, symptoms of irritation of the peritoneum, bowel viability, decompression of bowel, abdominal drainage, abdominal sepsis, endotoxemia, systemic inflammatory response syndrome, laparostomy, eventration

**3. Questions to the lesson**

1. Topography of the abdominal cavity.

2. Anatomy and physiology of the visceral peritoneum.

3. Etiology, pathogenesis of peritonitis.

4. Modern classification of peritonitis

5. Signs of peritonitis

6. Differential diagnosis of acute peritonitis

7. The essence of assessing the severity of peritonitis on scales APACHE 2 and SOFA.

8. Methods of diagnosis of acute peritonitis

9 . Preoperative preparation of patients with acute peritonitis

10. Modern principles of complex treatment of peritonitis.

11. The clinic, diagnosis and treatment of abdominal abscesses.

12. Methods of intracorporeal and extracorporeal detoxication

13. Rehabilitation of patients with acute peritonitis

**4. Questions for self-control**

1. Tell the anatomy and physiology of the peritoneum.

2. What are the main causes of peritonitis

3. Pathogenesis of peritonitis

4. Name the classification of peritonitis.

5. Sources of peritonitis and dissemination of the abdominal cavity in infection.

6. List the phases of peritonitis

7. What are the main signs of systemic inflammatory response (SIRS).

8. Stages of peritonitis depending on the degree of endotoxemia

9. Evaluation of the severity of peritonitis.

10. List the symptoms of peritonitis

11. Laboratory and instrumental methods of diagnosis of peritonitis

12. List the possible surgical approaches in peritonitis.

13. Stages of surgery in peritonitis.

14. The principles of the abdominal cavity drainage at peritonitis, indications for tamponade

15. Detoxication methods in peritonitis

16. Indications for the phased rehabilitation of the abdominal cavity, its types

17. Principles of enteral nutrition

18. Features of the postoperative management of patients with peritonitis

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**Topic 18. Operation day**

**1. Aims of the class:**

examine the work planned and emergency surgery, performing operations for various surgical pathology.

**Objectives**

The student should know:

1. The principles of organization of operating theatre

2. Preparation of the surgical team for the operation

3. Features of the surgeries in various fields: general surgery, neurosurgery, cardiac surgery, minimally invasive and urgent

4. The staff used in clean and purulent dressing rooms

The student should be able to:

1. Provide preparation of hands before surgery

2. Prepare the operative field and cover it with a sterile linen

3. Assist in the various surgical operations

4. Perform clean and purulent dressing, remove drains and to remove the sutures under the guidance of a teacher/nurse.

5. Fill in the operation protocol

**2. Definitions:**

surgery, elective surgery, emergency surgery, delayed surgery. Operating room, sterile zone, the zone of strict aseptic regimen, restricted area, common zone, the operative field, the sterile table, sterile sheets, a set of tools for the operation, stages of the operation, surgical access, surgical technique, suturing ща wounds , a set of tools for operations, dressing

**3. Questions to the lesson**

1. How work of the operating theatre is organized?

2. Preparation of hands for surgery

3. Sets for: general surgery, neurosurgery, cardiac surgery, minimally invasive operations

4. Stages of surgical intervention

5. Features of the endoscopic, minimally invasive operations

6. Methods of clean and infected wounds care, removal of sutures and removal of drainage.

**4. Questions for self-control**

1. Which area is isolated in operating room?

2. What are the stages of the operation?

3. What is included in the kit for laparotomy in abdominal trauma?

4. What is included in the surgical kit for endoscopic cholecystectomy?

5. What is the puncture of pancreatic cysts under ultrasound control?

6. How is intubation of small intestine during surgery performed?

7. The method of removing of the glove and gauze tampon?

8. What is minimally invasive surgery?

9. What is a surgical access?

10. What is burton suture?

11. What solutions are used for the sanitation of the abdomen?

12. What is the access to perform in abdominal trauma?

13. What kind of minimally invasive surgery can be performed under CT control?

14. What is omentobursoscopy?

15. Name the sequence of opreparation of the surgical field?

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**Topic 19. Abdominal trauma**

**1. Aims of the class:**

To study the mechanisms of damage of the abdominal cavity, signs of damage to the hollow and parenchymal viscus, the basic principles of diagnosis and treatment tactics in trauma of the abdominal cavity and retroperitoneal space.

**Objectives**

The student should know:

1. Anatomy of the abdominal wall, the abdominal cavity and retroperitoneal space

2. Classification of injuries of the abdomen

3. Signs, diagnosis and treatment principles in blunt abdominal trauma

4. Signs, diagnosis and treatment principles of penetrating and non-penetrating abdominal wounds

5. Surgical tactics in thoracoabdominal injuries

6. The surgical tactics in polytrauma

7. The rehabilitation of patients with severe abdominal trauma

The student should be able to:

- Carry out a clinical examination of patients with abdominal trauma

- To provide emergency assistance in the open, closed abdominal trauma, in polytrauma

- Perform the examination of the patient with closed abdominal trauma

- To conduct preoperative preparation of the patient with abdominal trauma

- To administer postoperative treatment of patients with abdominal trauma

**2. Definitions:**

Blunt abdominal trauma, nonpenetrating abdominal injury, penetrating abdominal wounds, stab wounds, gunshot wounds, combined trauma, polytrauma, eventration, symptom of Roly-Poly, double-moment organ rupture, abdominal ultrasound, laparoscopy, laparocentesis, primary debridement, laparotomy, hemostasis, revision of the abdominal cavity, the abdominal cavity sanitation, reinfusion, organ resection, splenectomy, Tachocomb

**3. Questions to the lesson**

1. Anatomy of the abdominal wall, the abdominal cavity and retroperitoneal space

2. Classification of blunt abdominal trauma, methods of diagnosis and treatment

3. Classification of open abdominal injury, principles of diagnosis and treatment

4. Surgical management of gunshot wounds

5. Diagnosis and treatment of abdominal stab wounds

6. Principles of treatment of penetrating abdominal wounds

7. Surgical tactics in thoracoabdominal injuries

8. Surgical tactics in severe polytrauma

9. Clinical features of parenchymal organ damage

10. Clinical features of damage of hollow organs

11. Clinical features of organ damage retroperitoneal pro-space

12. Emergency care in patients with abdominal trauma on pre-hospital stage

13. Urgent actions at eventration of abdominal cavity

13. Rehabilitation of patients with severe abdominal trauma

**4. Questions for self-control**

1. Wounds. The classification, structure of the wound channel.

2. Indications for surgical treatment of primary, secondary surgical debridement.

3. Stages of primary surgical treatment of wounds

4. Emergency medical aid in traumatic shock

5. Emergency care at eventration the abdominal cavity through the wound channel.

6. Medical management of gunshot wounds of abdomen

7. Medical management of blunt abdominal trauma

8. Management of abdominal stab wounds

9. Signs, diagnosis, and treatment policy for suspected intra-abdominal bleeding.

10. Medical tactic in bitten wounds, tetanus prophylaxis, rabies prevention

11. Indications and types of surgery in injuries of various organs

12. Management of patients with abdominal injuries in the postoperative period.

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.

**6. Extracurricular self-studies of students**

Oral presentation about treatment of abdominal organ injury (each student prepares short report on different organs injury).

**Topic 20. Credit with participation of patient.**

**1. Aims of the class:**

To carry out the control of knowledge and skills acquired by students during the learning cycle for surgical diseases. Rate of development by students of the differential diagnosis methodology. Identify gaps in the preparation during the training on the cycle.

**Objectives**

The student should know:

- Signs of acute surgical diseases of the abdominal cavity

- Algorithm of therapeutic and diagnostic procedures in acute diseases of the abdominal cavity

- Stages of surgery in acute diseases of the abdominal cavity

- Features of preoperative and postoperative patients regimen.

- Complex of rehabilitation measures

The student should be able to:

- reveal basic signs and establish a clinical diagnosis of acute surgical diseases

- make a plan of patient’s survey

- make differential diagnosis of acute abdominal diseases

- choose optimal forms of treatment of patients with acute surgical pathology of abdominal organs

- provide emergency assistance in case of acute surgical diseases of the abdominal cavity

**2. Definitions:**

Acute surgical diseases, "acute abdomen" (true, false), the preliminary diagnosis, clinical diagnosis, differential diagnosis, plan of survey, diagnostic and treatment algorithm, conservative treatment, surgery, emergency care, rehabilitation activities.

**3. Questions to the lesson**

1. Etiopathogenic mechanisms of acute appendicitis

2. Signs and methods of diagnosis of acute appendicitis

3. Features of acute appendicitis in the elderly, women and children

4. Types of surgical interventions for acute appendicitis, postoperative management of patients

5. Complications of acute appendicitis, treatment

6. Etiology, pathogenesis and classification of acute cholecystitis

7. Signs, diagnosis and treatment of acute cholecystitis

8. Etiology and pathogenesis of acute pancreatitis

9. Classification, Signs, diagnostic methods and treatment of acute pancreatitis

10. Indications for surgical intervention in acute pancreatitis

11. Etiopathogenic mechanisms of development of peritonitis

12. Modern classification of acute peritonitis

13. Signs, methods of diagnosis and treatment of acute peritonitis

14. Classification of acute intestinal obstruction

15. Etiology, Signs, methods of diagnosis and treatment of obstructive ileus.

16. The etiology, clinical features, diagnosis and treatment methods of strangulation intestinal obstruction

17. Hernia of anterior abdominal wall: the concept, classification, structure hernia

18. Inguinal hernia: classification and methods of surgical treatment

19. Femoral hernia: treatment methods, differential diagnosis with inguinal hernias.

20. Umbilical hernia: features preoperative examination, surgical treatment methods

21. Postoperative ventral hernia: classification, preoperative preparation, surgical treatment methods

22. Strangulated hernia: clinical, diagnostic and treatment methods

23. Gastrointestinal bleeding: etiology, clinical features, diagnosis and treatment methods

24. perforated ulcer: clinical, diagnostic and treatment methods

25. Penetration, malignancy: the concept, clinic, diagnosis, treatment.

26. Etiology, signs, methods of diagnosis and treatment of colon cancer

27. Methods of examination of the colon, especially preparations for the endo-scopic examination methods.

28. Diverticulosis of the colon, complications of diverticular disease.

29. Hemorrhoids: etiology, clinical features, complications, treatment

30. Paraproctitis, anal fissure: signs, diagnostic and treatment methods.

**4. Questions for self-control**

1. What are the clinical features of acute appendicitis in children?

2. What is pylephlebitis?

3. What is tactics of treatment in appendicular infiltrate?

4. In what situations is performed delayed surgery for acute cholecystitis?

5. How is the rehabilitation of patients after gallbladder removal?

6. What are the main mechanisms of acute pancreatitis

7. What is omentobursitis?

8. What are the main principles of conservative treatment in acute pan-Creative

9. What are the classification of the nature of peritonitis exudate

10. What are the main stages of surgery in peritonitis

11. What are the symptoms of bowel viability

12. What is the role od nasointestinal tube?

13. What are the hemodynamic parameters in patients with severe gastrointestinal bleeding?

14. The methods of surgical treatment of perforated gastric ulcers?

15. What are the drugs that are included in the haemostatic therapy?

16. What is the method of Gordon-Taylor in the treatment of perforated ulcer?

17. What is sclerotherapy and when is it used?

18. Name indications for setting probe Blakemore?

19. List the methods of endoscopic hemostasis

21. What are the main stages of the operation when strangulated hernia?

22. What methods of plastics hernial ring, you know?

23. What are the methods of inspection necessary to the patient with a hernia the linea alba before surgery? Why?

 24. What is the difference of strangulation intestinal obstruction from obstructive?

25. What is intussusception?

26. What are the clinical signs are characteristic of the right half of colon cancer?

27. What is the classification of anorectal abscess

28. What treatment is used in thrombosis of hemorrhoids?

29. What characterizes the fissures of the rectum?

30. What complications can occur with diverticulosis of the colon?

**5. Literature**

1. Bailey and Love’s Short Practice of Surgery. 25th edition. Edward Arnold (Publishers) Ltd, 2008. – 1513 p.: ill.

2. Manipal Manual of Surgery. 4th edition. K. Rajgopal Shenoy. Anitha Shenoy (Nileshwar). CBC Publishers & Distributors, 2014. – 1224 p., ill.

3. A manual on Clinical Surgery. S. Das. 10th edition, Calcutta, 2008. – 650 p., ill.