

Module / Course: Surgery (1)

Faculty: Medicine

Major: Medicine

Year of studies IV, ED

clinical classes (CC), 08.00-11.45

Educational objectives:

1. Students get acquainted with the knowledge of symptomatology of the main surgical diseases of abdominal and vascular surgery.
2. Students get acquainted with the modern diagnostic techniques in acute and chronic problems concerning gastrointestinal surgery and vascular diagnostic procedures.
3. Students get acquainted with the surgical terminology, surgical instruments and bandage techniques (desmurgy).
4. Students get acquainted with the principles of qualification to acute and elective surgical procedures.
5. Students get acquainted with the principles of aseptic and antiseptic procedures and perioperative antibiotic therapy, as well as with preoperative proceedings such as preparation of the surgical site and anticoagulation prophylaxis.
6. Students get acquainted with the principles of perioperative safety in acute and elective surgical procedures.

The detailed programme is as follows:

Winter semester:

1. Organization of surgical unit. Infections in surgery. Principles of antibiotic therapy. Aseptic and antiseptic procedures. Surgeon's preoperative proceeding: washing hands, preparation of the surgical area, surgical clothes. Legal regulations of the surgical ward. Patient's rights and duties. Patient's informed consent for surgical procedures. Diagnostic tests. Information about patient's health, professional secrecy. Case history. Examination of the patient. Handling with medical records.
2. Surgical instruments. The technique of surgical sutures. Hand-sewn sutures and stapling techniques. Vascular prostheses and biomaterials. Surgical terminology. Bandage techniques (desmurgy). Strains and sprains – dislocation of joints. Bone fractures. Handling with multiorgan injuries. Vascular injuries. Vascular complications of bone fractures. First aid at the place of accident. Transportation of the patient to the hospital. Case history. Examination of the patient. Handling with medical records.
3. Diagnostics and therapy of shock in surgery. Handling with hemorrhage, burns and frostbites. Assessment of state of patient's consciousness (Glasgow Coma Scale). Classification of wounds. The process of wound healing. Surgical treatment of wounds. General and local infections in surgical patients: sepsis, paronychia, panaritium, abscess, phlegmon, empyema. Case history. Examination of the patient. Handling with medical records.
4. Physiological basis of surgical treatment. Electrolyte equilibrium. Water balance. Acidosis and alkalosis. The principles of blood transfusion therapy. Blood components. Red blood cells substitutes. Case history. Examination of the patient. Handling with medical records.
5. The principles of clinical nutrition. Nutritional therapy (enteral and parenteral nutrition). Assessment of patient's nutritional state. Preoperative procedures in surgical patient. Large bowel preparation, gastric intubation, urine bladder catheterisation. Perioperative risk factors in surgery. Principles of surgical drainage therapy: downward drainage, suction drainage, irrigation drainage, open vs. closed drainage. Case history. Examination of the patient. Handling with medical records.
6. Wound related infections: tetanus, gas gangrene, erysipelas. Case history. Examination of the patient. Handling with medical records.

Summer semester:

1. Diseases of upper part of alimentary tract. Peptic ulcer disease of stomach and duodenum. Acute gastritis, gastric cancer, precancerous diseases. Peptic ulcer perforation, bleeding from upper part of alimentary tract. Modern diagnostic examinations and surgical treatment of upper alimentary tract diseases. Case history. Examination of the patient. Patient's

- documentation. Film.
2. Diseases of liver, bile ducts and pancreas (liver tumors, portal hypertension, gallstones of gallbladder and bile ducts, jaundice, acute and chronic pancreatitis). Pancreatic cancer. Surgical treatment of pancreas and bile duct diseases. Modern diagnostic methods in liver, pancreas and bile ducts diseases. Case history. Examination of the patient. Patient's documentation. Film.
 3. Large bowel diseases. Polyps, benign and malignant tumors of the colon, rectum and anus. Diagnosis and treatment of diverticular disease of the colon. Familial adenomatous polyposis. Inflammatory bowel diseases. Ulcerative colitis, Crohn's disease. Case history. Examination of the patient. Patient's documentation. Film.
 4. Diseases of venous system, chronic venous insufficiency. Diseases of arteries. Atherosclerosis, embolia and thrombosis. Arterial aneurysm. Varicose vein disease of legs. Thrombophlebitis of superficial and deep veins of lower limbs. Postthrombotic syndrome. Pulmonary embolia. Acute mesenteric ischemia. Progress in vascular surgery, new directions in treatment of vascular diseases. Gene therapy. Stentgrafts in aorta aneurysms. Vascular stents. Case history. Examination of the patient. Patient's documentation. Film.
 5. Acute diseases of abdominal cavity (limited and diffuse peritonitis). Appendicitis. Bowel obstruction. Hernias, obstructed hernias. Intestinal fistulas. Peritoneal abscesses. Modern diagnostics in abdominal surgery. Case history. Examination of the patient. Patient's documentation. Film.
 6. Diseases of thyroid gland, parathyroid and suprarenal glands. Nodular goitre. Hypothyreosis. Graves disease, Hashimoto syndrome. Thyroid and suprarenal neoplasms. New diagnostic methods used in thyroid, parathyroid and suprarenal diseases. Surgical procedures. Case history. Examination of the patient. Patient's documentation. Film.

Basic literature:

1. Principles and Practice of Surgery, O.J. Garden et al., Churchill Livingstone Elsevier
2. National medical series for independent study (NMS) Surgery, B.E. Jarrell, III R.A. Carabasi, Lippincott Williams & Wilkins
3. Oxford Handbook of Clinical Surgery, G.R. McLatchie, Oxford Medical Publications.

Additional literature and other materials:

1. Surgery – Crash Course, D. Horton-Szar, H. Sweetland, Mosby
2. Surgery - Basic Science and Clinical Evidence. J. Norton, P.S. Barie et al., Springer, New York

Credit for a grade.

Conditions to receive credit for the course: 90% attendance, knowledge of the topics of exercises and lectures, passing the final test.