МЕДИЦИНСКИ УНИВЕРСИТЕТ
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PLOVDIV
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Faculty of Medicine
Department of Cardiac and Vascular Surgery
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GENERAL SURGERY PROGRAM, INCL. ANESTHESIOLOGY AND EMERGENCIES

Department of Cardiac and vascular surgery

Medical University - Plovdiv, 2021

SYLLABUS

Discipline	Exams	Hours			Hours by years and semesters						
	Semester	General	Lectures	Exercise	IV	V	VI	VII	VIII	IX	X
General surgery	VII	75	30	45			1/1	1/2			

Type of discipline according to EDI:
Mandatory.

Level of training:
Master (M).

Forms of training:
Lectures, exercises, self-preparation.

Duration of training:
Two semesters.

Hours:
30h lectures, 45h. exercises.

Teaching aids:
Multimedia presentations, educational films, discussions, demonstrations of methods and tools, solving practical tasks.

Forms of assessment:
Ongoing evaluation.

Formation of the assessment:
A current grade is formed for each semester.

Aspects in the formation of the assessment:
Participation in the discussion.

Semester exam:
Yes / written test, oral and practical exam /.

State Examination:
No.

Leading lecturer:
Habilitated lecturer from the Department of Cardiac and Vascular Surgery.

Department:
Cardiovascular surgery.

ANNOTATION

The training in surgical diseases of the students of dental medicine includes acquaintance with the modern methods for physical, instrumental and hardware examination of the patients. Basic knowledge of taking the anamnesis and the general status of the surgical patient. The study of the various systems of the human body, focusing on diseases of the head and neck and those reflected in dentistry. Students get acquainted with the basic manipulations used in surgery - injections, infusions, punctures and catheterizations, gastrointestinal duodenal probing, dressings. Students receive basic concepts for working in operating and surgical instruments. They get acquainted with the general principles of resuscitation and general and local anesthesia.

MAIN TASKS OF THE CURRICULUM

Students should be trained to perform basic manipulations in surgery with an emphasis on controlling life-threatening conditions - temporary and permanent hemostasis, immobilization, cannulation of peripheral and central venous vessels, catheterization of the bladder, gastric lavage and others. Students of dental medicine to be trained in taking the anamnesis and status of the patient and the principles of keeping medical records.

EXPECTED RESULTS

After completing the training, dental students:

- to have basic theoretical and practical knowledge in the examination of the surgically ill;
- taking anamnesis, physical examination of individual organs and systems;
- recording the received information, drawing up a history of the patient's disease and its current management.
- to acquire theoretical knowledge, allowing them to focus on the general condition of the patient and to focus on local surgical changes;
- to master practical actions when performing emergency manipulations and procedures - stopping life-threatening bleeding, immobilization, appropriate posture during transportation, etc ;
- to master some often necessary in everyday practice general medical manipulations such as gastric lavage, medical enema, inclusion of a system for venous infusions, etc ;
- mastering the technique of determining blood groups and blood transfusion;
- infusion treatment for shock, etc ;

- to master manipulations at the first meeting with patients with local purulent-surgical foci, especially those in the face and neck.

LECTURES - ABSTRACTS

III course, VI semester and IV course, VII semester

LECTURE № 1 - 2h.

DEFINITION AND SUBJECT OF SURGERY. RELATIONSHIPS AND INTERACTION WITH OTHER SCIENCES. BRIEF HISTORY OF SURGERY.

1. Definition of surgery and surgeon.
2. Subject of surgery.
3. Connection and interaction with other sciences - internal medicine, biology, chemistry, biochemistry, physiology, pathophysiology, oncology, transplantology, etc.
4. Pillars in the development of surgery - detection of blood circulation, detection of X-rays, introduction of hemostasis, antiseptics and asepsis in surgery. Detection and introduction of antibiotic treatment. Blood group detection, history of blood transfusion, onset and development of transplantology.

LECTURE № 2 - 2h.

SURGICAL OPERATION - DEFINITION, TYPES OF OPERATION, OBJECTIVES. INDICATIONS AND CONTRAINDICATIONS FOR SURGERY. OPERATIONAL RISK - DEFINITION, TYPES, SIGNIFICANCE. PRINCIPLES OF PREOPERATIVE PREPARATION AND POSTOPERATIVE MANAGEMENT.

1. Definition and essence of the surgical operation;
2. Purposes of surgical operations.
3. Indication for surgery, types, significance.
4. Contraindications for surgery.
5. Operational risk - types;
6. Preoperative preparation of individual systems for surgery.
7. Postoperative management of the patient - criteria for monitoring, adequate interventions in the correction of complications

LECTURE № 3 - 2h.

ASEPTICS And ANTISEPTICS KINDS ANTISEPTIC MEANS. STERILIZATION - FORMS.

1. Definition of antiseptics - historical review and periods in the development of surgery depending on the level of antiseptics;
2. Classification of antiseptics. Antibiotics and sulfonamides c surgical practice;
3. Definition and significance of asepsis;
4. Sterilization methods - technical implementation, sterilization phases;
5. Sterilization of various materials, instruments and apparatus used in surgical practice;
6. Some new methods of sterilization.

LECTURE № 4 - 2h.

BASIC PRINCIPLES AND METHODS OF ANESTHESIA IN SURGERY. PECULIARITIES OF DENTAL MEDICINE ANESTHESIA

1. Definition of analgesia;

2. Characteristics of general anesthesia;
3. Characteristics of local anesthesia;
4. Types and techniques of local anesthesia;
5. Local anesthesia in dentistry;
6. Means for local anesthesia - a characteristic of the most commonly used local anesthetics;
7. Behavior in case of side effects under local anesthesia.

LECTURE № 5 - 2h.

CONGENITAL SURGICAL DISEASES. ETIOLOGY, DIAGNOSIS, PRINCIPLES OF SURGICAL TREATMENT. CONGENITAL DISEASES IN THE AREA OF THE HEAD AND NECK.

1. Definition and classifications of congenital surgical diseases;
2. Factors leading to congenital surgical diseases - mechanical, physical, chemical, biological, etc.
3. Frequency of congenital surgical diseases in different areas;
4. Diagnosis of congenital diseases of the head, face, neck and spine.
5. Healing behavior in congenital clefts of the head, face, palate;
6. Congenital cysts and fistulas in the neck - middle and lateral.

LECTURE № 6 - 2h.

TRAUMATIC DISEASES - CLASSIFICATION, CLINICAL CHARACTERISTICS, BEHAVIOR.
TRAUMATISM - DEFINITION, TYPES OF CHARACTERISTICS.

1. Etiology of traumatic diseases. Types and characteristics of damaging factors;
2. Mechanism of receiving the various traumatic injuries;
3. Classification of traumatic injuries - open and closed;
4. Closed traumatic injuries - definition and types;
5. Trauma - definition. Types of injuries. Specific characteristics of the different types of injuries. Organizations for providing assistance in case of mass traumatic injuries.

LECTURE № 7 - 2h.

DETECTED INJURY, TYPES, CHARACTERISTICS, DIAGNOSIS, TREATMENT TACTICS

1. Wound - definition, characteristics, phases in the development of the wound process;
2. Types of wounds
   - cut and cut wound;
   - contusion and laceration;
   - stab wound;
   - bite wound;
   - gunshot wound;
3. Characteristics of the different types of wounds in terms of degree of bleeding, degree of damage to the surrounding tissues, possibilities for application of surgical treatment, possibilities for infection, for development of anaerobic infection, etc ;
4. Treatment and completion of manipulations for different types of wounds.
5. Factors for primary and secondary wound healing.

LECTURE № 8 - 2h.

Bleeding and hemostasis. TYPES OF BLEEDING, CRITERIA FOR THE SERIOUSNESS OF BLOOD LOSS. FIRST AID AND FURTHER TREATMENT TACTICS.

1. Causes leading to bleeding;
2. Types of bleeding - arterial, venous, capillary, parenchymal;

3. Criteria for determining the severity of blood loss - physical, laboratory and instrumental, hardware ;
4. Behavior in a patient with severe blood loss;

5. Methods of hemostasis - characteristics of biological hemostasis ;
6. Methods of artificial hemostasis - temporary and permanent;
7. Preparation and organization of transportation of a patient with severe blood loss.

LECTURE № 9 - 2h.

BLOOD TRANSFUSION - HISTORY, CURRENT DATA ON THE TYPES OF AGGLUTINOGENES AND AGGLUTININS IN HUMAN BLOOD. TYPES OF BLOOD TRANSFUSION. ROLE OF BLOOD. COMPLICATIONS IN BLOOD TRANSFUSION - BEHAVIOR. BLOOD PRODUCT. OTHER TRANSFUSION THERAPY.

1. Brief description of the doctrine of blood groups;
2. Types of agglutinogens and agglutinins in human blood. The role of significant of them for the modern level of medical science ;
3. Rules for blood transfusion;
4. Types of blood transfusion;
5. Role of transfused blood;
6. Possible complications - types, early and late reactions, clinical manifestations, behavior;
7. Possible mistakes in blood transfusion - avoidance, behavior;
8. Possibilities for preservation and storage of blood;
9. Whole blood and blood products - indications for use.
10. Documenting the blood transfusion.

LECTURE №10 - 2h.

INFLAMMATORY DISEASES. SURGICAL INFECTION - TYPES.
GENERAL AND LOCAL REACTIONS OF THE BODY.

1. Definition and main characteristics of the inflammatory process;
2. Surgical infection - causes, main characteristics and practical signs of the caused processes;
3. Purulent surgical infection / GHI / - causes, characteristics.
4. Local forms of purulent surgical infection;
5. General reactions in purulent surgical infection. Criteria for reporting the severity of injuries in purulent surgical infection ;
6. GHI distribution routes

LECTURE № 11 - 2h.

PURULENT SURGICAL INFECTION OF DIFFERENT ORGANS AND SYSTEMS. FOCUS INFECTION IN THE AREA OF THE FACE AND NECK. DIAGNOSIS - TREATMENT TACTICS.

1. Factors facilitating the development of local purulent surgical infection;
2. Susceptibility of various tissues and organs to the development of GHI;
3. General characteristics of the most severe local purulent surgical processes in the human body - purulent processes in the cranial cavity, thoracic and abdominal cavities.
4. Characteristics and behavior in boils, carbuncles, panaritium, abscess, phlegmon, hidradenitis;
5. Features of local and purulent surgical conditions in the facial and cervical region.

LECTURE № 12 - 2h.

GENERAL, ACUTE PURULENT SURGICAL INFECTION. CLINICAL FORMS. DIAGNOSIS, BEHAVIOR. ACUTE ANAEROBIC INFECTION - ANTHRAX, TETANOS, GAS GANGRENA, FUSOSPIROCHET INFECTION.

1. Definition of general, acute purulent surgical infection;
2. Toxemia - characteristic, clinical manifestation, diagnosis;
3. Sepsis / septicemia / - characteristic, most common causes, clinical manifestation, behavior, prognosis ;
4. Septicemia - characteristic, clinical manifestation. The most common places of secondary purulent foci. Methods of diagnosis, behavior, prognosis.
5. Acute anaerobic infection - characteristics, conditions and factors conducive to its development.
6. Anthrax ;
7. Tetanus;
8. Gas gangrene;
9. Acute fusospirochete infection.

LECTURE № 13 - 2h.

CHRONIC SURGICAL INFECTION. DEFINITION, CLINICAL SIGNIFICANCE. PARASITOSIS WITH SURGICAL INTEREST. Ulcers and fistulas.

1. Definition of chronic surgical infection. The most common local purulent surgical foci ;
2. Diagnosis and behavior in chronic purulent surgical infection ;
3. The most common parasitoses of surgical significance in our country - clinical characteristics and behavior in different localizations of echinococcosis;
4. Ulcers and fistulas - classification, clinical characteristics, diagnostic methods, medical behavior.

LECTURE № 14 - 2h.

TUMORS - CLASSIFICATIONS, CLINICAL CHARACTERISTICS, DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS. BEHAVIOR. Malignant neoplasms in the area of the face, lips and tongue.

1. Definition of neoplasm;
2. Classification of neoplasms;
3. Differential diagnosis between benign and malignant processes;
4. Main clinical signs;
5. Methods of spreading malignant tumors;
6. General characteristics of the treatment methods for malignant tumors ;
7. Malignant tumors in the face and neck;
8. Cancer of the tongue;
9. Lip cancer.

LECTURE № 15 - 2h.

ORGAN AND TISSUE TRANSPLANTATION. CURRENT STATUS OF THE PROBLEM, TYPES OF TRANSPLANTATION, ORGANIZATION AND CONDUCT. 1. Definition ;

2. Types of transplants ;
3. Criteria for determining the possibilities and predicting the consequences of transplants ;

4. The most common transplants of organs and systems;
5. Causes of failure in transplantation ;
6. System and organization of organ and tissue transplants;
7. Artificial tissues and organs - present and future.

EXERCISES - ABSTRACTS

III course, VI semester and IV course, VII semester

EXERCISE № 1

MEDICAL HISTORY.
1.1 Getting acquainted with the basic rules for taking a medical history ;
1.2 Elements of the anamnesis in a surgically ill ;
1.3 Documentation of the anamnesis data;
1.4 Complete preparation of a history of the disease / IS / of a surgically ill ;
1.5 Practical implementation of the above at the patient's bedside.

EXERCISE № 2

GENERAL STATUS OF SURGICALLY ILL.
2.1 Methods of physical examination of the patient - examination, palpation, auscultation, percussion ;
2.2 Instrumental research methods ;
2.3 Location of laboratory tests;
2.4 Hardware research methods;
2.5 Examination of skin and mucous membranes - color, rash units. Dynamic monitoring of their changes in the course of the disease.

EXERCISE № 3

HEAD EXAMINATION.
3.1 Surgical anatomy of the maxillofacial area;
3.2 Congenital surgical diseases of the head and skull ;
3.3 Congenital surgical diseases of the face ;
3.4 Congenital surgical diseases of the neck. / part of the exercises are conducted on the basis of pediatric surgery in order to adequately demonstrate practical cases./
3.5 Acquired surgical diseases of the head and neck

EXERCISE № 4

EXAMINATION OF BLOOD VESSELS
4.1 Brief topographic anatomy of the circulatory system.
4.2 Physical methods of examination of blood vessels ;
4.3 Functional tests in the study of arterial, venous and lymphatic systems ;
4.4Instrumental methods of examination of blood vessels ; Hardware methods ;
4.5 Acute and chronic arterial insufficiency ; Varicose veins, venous thrombosis ; Examination of lymph vessels and nodes.

EXERCISE № 5

EXAMINATION OF THE CHEST WALL AND THE ORGANS IN THE CHEST.
5.1 Brief topographic anatomy of the chest and organs in it ;
5.2 Physical examinations of the chest and its organs;
5.3 Examination of the mammary gland and general information on the most common surgical diseases ;
5.4 Congenital diseases of the chest wall and chest organs - general information ;
5.5 The most common traumatic injuries in the chest - rib fracture, pneumothorax, chemothorax ;
5.6 The most common chronic diseases of the chest;

EXERCISE № 6

ANESTHESIOLOGY
6.1 General characteristics of general and local anesthesia;
6.2 Methods of performing anesthesia in dental practice;
6.3 Means and techniques of local anesthesia in dental practice ;
6.4 Dynamic control of the patient during local anesthesia ;
6.5 Possible complications and their treatment during local anesthesia in dental practice ;

EXERCISE № 7

STOMACH EXAMINATION.
7.1 Brief topographic anatomy of the abdominal area;
7.2 Taking anamnesis and physical status in a patient with acute surgical abdomen ;
7.3 Physical status in other abdominal diseases ;
7.4 Abdominal puncture ;
7.5 Gastric lavage and gastric-duodenal probing;
7.6 Rectal douching, diagnostic enemas.

EXERCISE № 8

DIGESTION OF THE DIGESTIVE SYSTEM
8.1 Brief topographic anatomy of the organs in the abdominal cavity ;
8.2 Physical examination of the abdominal organs;
8.3 Apparatus examinations - endoscopic, X-ray and X-ray contrast examinations of the organs of the digestive system ;
8.4 Examination of a patient with peptic ulcer disease, intestinal obstruction, appendicitis and the most common tumors.
8.5 Modern techniques in the treatment of abdominal diseases ;

EXERCISE №9

EXAMINATION OF THE LIVER, BILE TRACT AND PANCREAS.
9.1 Brief topographic anatomy of the biliary-hepatic region ;
9.2 Place of physical examination in diseases of the liver, gallbladder and pancreas ;
9.3 I nstrumental and hardware methods in the study of liver and bile disease and pancreas ;
9.4 The most common diseases and clinical manifestations ;
9.5 Jaundice - diagnosis, differential diagnosis;

9.5 The most common treatment methods

EXERCISE № 10

OPERATING UNIT

10.1 Acquaintance with the modern requirements for the device of the operating unit;
10.2 Preparation and introduction of a patient in an operating room;
10.3 Preparing the team and the patient for the upcoming operation;
10.4Preparation and introduction of the patient in anesthesia ;
10.5 Position of the patient on the operating table ;
10.5 Preparation of the operating field ;
10.6 Dynamic control of the patient on the operating table ;
10.7 Treatment of surgical linen and instruments ;
10.8 Preparation and removal of the patient from the operating room;

EXERCISE № 11

THERMAL INJURY

11.1 Definition and types of thermal damage;
11.2 Factors determining the severity of thermal trauma ;
11.3 Practical determination of burn rates ;
11.4 First aid and further behavior in a patient with thermal trauma ;
11.5 Anesthesia and resuscitation of a patient with thermal trauma. Formulas for determining the doses of medical - resuscitation solutions ;
11.6 Local treatment of a patient with thermal trauma ;
11.7 Preparation and performance of plastic operations in a patient with plastic trauma ;
11.8 Electric shock damage;
11.9 Frostbite - general and local forms of frostbite, definition, severity, treatment tactics.

EXERCISE № 12

INVESTIGATION OF THE URINARY SYSTEM.

12.1 Brief topographic anatomy of the organs of the urinary system ;
12.2 Physical, instrumental and hardware methods of research;
12.3 Main clinical manifestations of diseases of the urinary system;
12.4 The most common diseases and their clinical picture - nephrolithiasis, hydro and pilo nephrosis, urinary retention ;
12.5 Catheterization and puncture of the bladder;
12.6 Treatment tactics for the most common diseases of the urinary system

EXERCISE № 13

OTHER PUNCTIONS, CATHETERIZATIONS, MANIPULATIONS.

13.1 Necessary tools for performing a puncture ;
13.2 Purposes of punctures of different areas and systems ;
13.3 Chest puncture in emergencies;
13.4 Trachiotomy and trachiostomy in vital conditions;
13.5 Puncture and drainage of the abdominal cavity ;
13.6 Puncture, incision and drainage in purulent collections ;
13.7 Lumbar diagnostic punctures ;

EXERCISE № 14

GASTROINTESTINAL DUODENAL PROBING, enemas.

14.1 The most common diseases of the stomach and duodenum, requiring their probing ;

14.2 Necessary means for conducting, types of probes;

14.3 Behavior in bleeding from esophageal varices ;

14.4 Gastric lavage, permanent gastric and duodenal aspirations;

14.5 Enemas - types, technical performance;

EXERCISE № 15

BLOOD GROUPS, BLOOD TRANSFUSION, HEMOSTASIS

15.1 Necessary means for performing blood group testing;

15.2 Technical implementation of the blood group test;

15.3 Possible technical errors and complications in determining blood groups ;

15.4 Preparing the patient and blood for blood transfusion ;

15.5 Direct and biological blood transfusion test ;

15.6 Dynamic monitoring of the patient for possible clinical manifestations in case of incompatible blood transfusion ;

15.7 Tactics in case of established deviations during blood transfusion ;

15.8 Hemostasis - mechanical, temporary and permanent;

EXERCISE № 16

INJECTIONS, INFUSIONS

16.1 Possible routes of drug administration in the patient ;

16.2 Types of injections, features, technical implementation;

16.3 Roads and means for cannulation and permanent infusion of solutions;

16.4 Apparatus for dosing infusion solutions;

16.5 Venesection ;

EXERCISE № 17

EXAMINATION OF BONE AND JOINTS.

17.1 Brief topographic and anatomical characteristics of the bone and joint apparatus;

17.2 Physical examination of a patient with sprained, dislocated and broken bones ;

17.3 First aid, immobilization and preparation of the patient for transport;

17.4 Types of rails;

17.5 Dynamic follow-up of a patient with sprain and fracture. Possible complications from compression, hematomas, bone fragments and splints ; 17.6 Gypsum dressings;

17.7 Extension and adhesive dressings.

EXERCISE № 18

RESUSCITATION.

18.1 Place of resuscitation in the struggle for the patient's life ;

18.2 Preoperative, intraoperative and postoperative resuscitation of patients; 18.3 Dynamic monitoring of changes in the water, electrolyte, protein and alkaline-acid balance of the oil and their adequate correction if necessary;

18.4 Examination of central venous pressure ;

18.5 Techniques of artificial respiration and cardiac massage;

18.6 Puncture for cardiac tamponade.

EXERCISE № 19

BANDAGE BANDAGES.

19.1 Types of dressings;

19.2 Bandages in the head and maxillofacial area;

19.3 Bandages and fixation in case of fracture of upper and lower limbs.

19.4 Dynamic follow-up of a patient after dressings;

EXERCISE № 20

WOUND BANDAGES. DRAINAGE.

20.1 Operative and accidental wounds - aseptic and infected ;

20.2 Dressing of aseptic wounds ;

20.3 Treatment, dressing and drainage of infected wounds ;

20.4 Types of drainages ;

20.5 Dynamic monitoring of a patient with an aseptic and infected wound;

20.6 Thread removal;

20.7 Secondary treatment of wounds;

EXERCISE № 21

SURGICAL INSTRUMENTS

21.1 Introducing students to the main groups of surgical instruments ;

21.2 Place of use of the individual surgical instruments ;

21.3 Preparation and sterilization of the different types of surgical instruments ;

21.4 Introducing students to the basic endoscopic instruments and devices.

EXERCISE № 22

NEGOTIATION

LITERATURE

1. Lecture material;
2. Textbook of surgery for dentists / edited by Prof. N. Yaramov, edition 2009
3. Guides for practical exercises in propaedeutics of surgical diseases and surgery.

Approved on:18 July 2024

Head of department:
Associated Prof. Buryan Kirov _____