

MEDICAL UNIVERSITY of PLOVDIV
FACULTY of MEDICINE

SYLLABUS

IN

PEDIATRIC SURGERY

Cycle Specialized Surgery

Approved by the Section Council on 01.07.2020

Confirmed by the Faculty Council on 08.07.2020

Cycle “ Pediatric Surgery”

Syllabus

Discipline	Exam in semester	Tuition hours				Tuition hours by year and semester	
		Overall	Lectures	Practicals	Credit	IV c	V c
Pediatric surgery	VIII/IX semester	24	8	16	1,26	8 sem.	9 sem.
						24	24

- The credits are for specialized surgery

COURSE NAME:

„Pediatric surgery”

TYPE OF COURSE ACCORDING TO THE UNIFORM STATE REQUIREMENTS:

Obligatory

LEVEL OF EDUCATION:

Master /M/

FORMS OF TRAINING:

Lectures and practicals - bedside practicals, in manipulation, bandage and operating halls

YEAR OF TRAINING:

IV + V course

DURATION OF TRAINING:

4 weeks

ACADEMIC HOURS:

8 hours lectures, 16 hours practicals

TECHNICAL EQUIPMENT APPLIED IN THE TRAINING: PPT presentations, tables, schemes, graphics and drawings, X-ray images, photographs, films, operative atlas.

FORMS OF EVALUATION:

- Current control – Oral questioning at every practical, colloquiums by sections
- Final control - Written exam, interview with the examiner, tests

SCORE ASSESMENT:

It is formed by the current control and the grades from the written and oral exam at the end of the semester

EVALUATION CRITERIA:

Excellent 6 – Profound understanding of the factology as well as additional knowledge and skills, including innovations in the area of interest. Original thinking and arguments about the causal connections should be presented.

Very good 5 - Very good knowledge about the factology of the topic. Skills to apply the knowledge in complex cases.

Good 4 – mastering key knowledge about the topic without the ability to develop them into original thinking

Average 3 – assimilation of key knowledge about simple tasks

Weak 2 – doesn't meet any of the aforementioned aspects

ANNUAL EXAM : YES - Part of specialized surgery exam- written and oral

STATE EXAM: No

LECTURERS: Habilitated tutors from the department of “Propaedeutic to surgical diseases”, Section- Pediatric surgery

SECTION: Propaedeutic of surgical diseases

➤ **ANNOTATION**

Pediatric surgery is studied as a separate surgical discipline. It is a part of the Specialized surgery exam. The most common diseases for pediatric age are studied during the Pediatric surgery course, such as: congenital diseases of the esophagus and the diaphragm, hypertrophic pyloric stenosis, congenital anomalies of the small and large intestine, acute surgical abdomen in pediatric patients, acute purulent infections in children, congenital diseases of the anterior abdominal wall, tumors in pediatric population.

➤ **COURSE OBJECTIVES**

1. Getting acquainted with the most frequent diseases in Pediatric surgery: etiopathogenesis, pathoanatomy, clinical presentation.
2. Mastering the diagnostic methods in different nosological units and their practical use
3. Getting acquainted and mastering the principles of treatment of the pediatric surgical diseases

➤ **RESULTS EXPECTED**

1. Theoretical knowledge:
 - Clinical presentation of the esophageal atresia and hypertrophic pyloric stenosis, diagnostic methods and principles of operative treatment
 - The most frequent nosological units leading to acute surgical abdomen
 - Clinical presentation and X-ray signs of pneumothorax and pyothorax

- Recognition of the significance of prenatal diagnostics for congenital anomalies
- Knowledge about the features of transporting children with congenital anomalies
- Knowledge about the terms of operative treatment of congenital anomalies

2. Practical skills:

- Inserting a naso-gastric tube
- Executing trans illumination
- Performing rectal examination
- Executing pleural puncture
- Ablation of the preputium
- Carrying out preoperative treatment for dehydration and intoxication until reaching the hospital

➤ **LECTURES- TOPICS**

LECTURE N1- 2 hours. HISTORY OF PEDIATRIC SURGERY. DISEASES OF THE ESOPHAGUS AND STOMACH

1. Pediatric surgery as an independent surgical discipline
2. Anatomico physiological features in pediatric age and their significance for the surgical pathology
3. History of Pediatric Surgery
4. History of Pediatric Surgery in Bulgaria
5. Interrelations between pediatric surgery and other medical disciplines
6. Esophageal atresia
7. Hypertrophic pyloric stenosis

LECTURE N2- 2 hours. ACUTE SURGICAL ABDOMEN IN PEDIATRIC AGE- ACUTE APPENDICITIS, INVAGINATION, INCARCERATED INGUINAL HERNIA.

1. Acute appendicitis in pediatric age
2. Invagination (intussusception)
3. Incarcerated inguinal hernia in pediatric age

LECTURE N3- 2 hours. ANORECTAL ANOMALIES

1. Forms of anorectal anomalies
2. Clinical presentation and diagnostics
3. Principles of non-operative and operative treatment. Management algorithm

LECTURE N4- 2 hours. MOST FREQUENT CONGENITAL ANOMALIES IN PEDIATRIC AGE.

1. Congenital diaphragmatic hernia
2. Classification of congenital intestinal obstruction, clinical presentation, diagnostics, treatment
3. Meconium ileus
4. Duplications of the gastro intestinal tract

➤ PRACTICALS - TOPICS

PRACTICAL N1- 2 hours. CONGENITAL DISEASES OF THE ESOPHAGUS AND DIAPHRAGM

1. Esophageal atresia
2. Congenital isolated trachea-esophageal fistula
3. Congenital esophageal stenosis
4. Esophageal diverticulum
5. Chalasia of the cardia
6. Achalasia of the cardia

PRACTICAL N2- 2 hours. CONGENITAL DISEASES OF THE ANTERIOR ABDOMINAL WALL

1. Omphalocele- clinical presentation, diagnostics, differential diagnosis, treatment
2. Gastroschisis – clinical presentation, diagnostics, treatment
3. Hernias- clinical presentation, diagnostics, treatment
4. Urinary bladder exstrophy- clinical presentation, diagnostics and treatment principles

PRACTICAL N3- 2hours. CONGENITAL DISEASES OF THE STOMACH AND GERD

1. Hypertrophic pyloric stenosis
2. Gastroesophageal reflux- clinical presentation and diagnostics, conservative and operative treatment

PRACTICAL N4- 2 hours. CONGENITAL DISEASES OF THE SMALL INTESTINE

1. Congenital diseases of the duodenal segment with clinical presentation of total or subtotal intestinal obstruction
2. Congenital diseases- atresia and stenosis of the small intestine
3. Surgical complications of Meckel's Diverticulum
4. Meconium ileus

PRACTICAL N5- 2 hours. CONGENITAL DISEASES OF THE LARGE INTESTINE

1. Congenital diseases- atresia and stenosis of the large intestine
2. Hirschsprung's Disease
3. Anorectal malformations

PRACTICAL N6- 2 hours. ACUTE SURGICAL ABDOMEN IN PEDIATRIC AGE- ACUTE APPENDICITIS, INTUSSUSCEPTION, INCARCERATED INGUINAL HERNIA

1. Definition of the concept. Criteria
2. Classification of the diseases in the group of acute surgical abdomen
3. Features of acute surgical abdomen in pediatric age
4. Clinical presentation
5. Laboratory diagnostics of acute surgical abdomen
6. Instrumental diagnostics of acute surgical abdomen
7. "Masks" of acute surgical abdomen
8. Treatment- operative and non-operative

PRACTICAL N7- 2 hours. ACUTE PURULENT INFECTIONS IN PEDIATRIC AGE- NECROTIC PHLEGMONA, ANAEROBIC INFECTION, PURULENT DISEASES OF THE LUNGS AND PLEURA, ACUTE HEMATOGENIC OSTEOMYELITIS.

1. Definition

2. Causing agents- general characteristics
3. Clinical presentation- syndrome characteristics
4. Treatment methods
5. Features of acute hematogenic osteomyelitis in pediatric age- principles of early diagnostics, most frequent mistakes, X-ray diagnostics, principles of treatment

PRACTICAL N8 - 2 hours. TUMORS IN PEDIATRIC AGE

1. Wilms tumor
2. Neuroblastoma
3. Rhabdomyosarcoma

➤ **BIBLIOGRAPHY:**

1. Internet – Pediatric surgery, 6th edition, Jay Grosfeld et al, Mosby, 2006.
2. Internet – Pediatric surgery, P. Puri, M. Hollwarth ed. Springer, 2006.
3. Abdominal Surgery of Infancy and Childhood, Harwood Academic Publishers – W. Donnellan, J. Burrington, K. Kimura et al, Vol 1, 2
4. Pediatric surgery – 5 editionq Vol. 1 – 2 , James O’Neill, Marc Rowe, J. Grosfeld et al
5. Newborn Surgery – Edited by Prem Puri MS, FACS – Butterworth Heinemann

➤ **LIST OF EXAM TOPICS**

1. Esophageal atresia
2. Congenital diaphragmatic hernias
3. Hypertrophic pyloric stenosis
4. Congenital duodenal obstruction
5. Congenital intestinal obstruction
6. Hirschsprung’s disease
7. Anorectal anomalies
8. Intussusception
9. Meckel’s diverticulum and its complications
10. Acute appendicitis in pediatric age
11. Bacterial destructions of the lungs
12. Acute hematogenic osteomyelitis in children
13. Congenital anomalies of the anterior abdominal wall
14. Солидни тумори в детската възраст Solid tumors in pediatric age

The program was updated in June 2020 and accepted at a Department Council with protocol N6/01.07.2020. The tuition program is also in accordance with the proposals and opinion of the students.