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**Ministry of Health of the Republic of Moldova
Public Institution State University of Medicine and Pharmacy "Nicolae
Testemitanu" of the Republic of Moldova**

Approved

At the meeting of the Faculty Council Nr. 2
Minutes No. 3 of 25.02.2014

Dean of the Faculty of Medicine Nr.2
PhD, associate professor M. Betiu



Approved

At the meeting of the Chair of Pediatric
Surgery, Orthopedics and Anesthesiology
Minutes No.28 of 19.03.2014

Head of the chair,
PhD, professor Academician, MD, Honorary
Citizen E. Gudumac Eva Gudumac

SYLLABUS FOR STUDENTS OF THE FACULTY OF MEDICINE

Name of the course: **Pediatric Surgery**

Code of the course: **S. 09.0.076**

Type of course: **compulsory**

Total number of hours – 70

lectures - 20 hours, practical lessons - 50 hours

Number of credits provided for the course: **3**

Lecturers teaching the course:

Bernic J., PhD, professor,

Jalbă A. DM, associate professor,

Vera Dzero, DM, associate professor

Chisinau 2014



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I. Aim of the discipline

The goal of the course of Pediatric Surgery provided for the V year students of the Faculty of Medicine is:

- II. To study congenital malformations and developed surgical diseases in children, specific features of diagnostics and treatment; to learn particularities of anesthesia and intensive care in children;
- III. To provide future doctors with theoretical knowledge and practical skills;
- IV. To learn diagnostic methods, medical tactics in several surgical pathologies;
- V. To provide emergency to children with surgical diseases.

II. Objectives obtained in teaching the discipline

The main objective of the discipline of Pediatric Surgery is to provide each physician with necessary knowledge, irrespectively of specialty, to know and recognize congenital malformations and pediatric surgical diseases.

- At the level of knowledge and understanding

At the level of understanding:

- to recognize congenital malformations and developed surgical diseases in children;
- to know specific features of the onset and evolution of several surgical diseases in children;
- to understand methodology of examination and specific characteristics of children with surgical diseases;
- timing of performing surgery;
- the essential detail that should be emphasized is that the same disease in adults and children in no case should be treated identically;
- rehabilitation of children with surgical diseases.

- At the level of application

- to take and to assess correctly anamnestic data;
- to perform the examination of a child with suspected surgical disease;
- to be able to make a presumptive diagnosis;
- to estimate the severity of a patient's condition;
- to be able to provide emergency care in urgent cases.

Teaching Pediatric surgery is based on the main principle - from semiology to a detailed study of each disease.

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- At the level of integration
- to realize the importance of Pediatric Surgery in the context of Medicine;
- to regard creatively the problems of fundamental medicine:
- to deduct interrelations between Pediatric Surgery and other fundamental disciplines;
- to possess abilities to implement and integrate the received knowledge of Pediatric Surgery and fundamental disciplines;
- to be able to assess and self-appraise objectively the knowledge in the field.

The questions for lectures, seminars and the listed practical skills were approved at the meeting of the Department of Pediatric Surgery, Orthopedics and Anesthesiology Minutes Nr. 11 from 17.01.2011.

III. Provisional terms and conditions

The scope of the Pediatric Surgery course is to inform the students about classical notions and medical achievements in the field of surgical diseases of children.

IV. Main themes of the course

A. Lectures:

Nr.	Theme	Hours
1.	Specific characteristics of Pediatric surgery. The examination methods in pediatric surgery. Esophageal and stomach diseases. Esophageal atresia. Tracheo-esophageal fistula. Hypertrophic pyloric stenosis. Definition. Embryology. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment. Complications. Congenital bowel obstruction. Duodenal obstructions. Small bowel malformations. Meconial ileus. Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.	2
2.	Anorectal and colonic malformations. Hirschsprung disease. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Acquired bowel obstructions. Intussusception. Peritoneal adhesions. Volvulus. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.	2
3.	Acute appendicitis in children. Peculiarities in infants, babies. Peculiarities of diagnosis and treatment. Peritonitis in children. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications. Specific features in premature infants, newborns, babies.	2



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4.	<p>Anterior abdominal wall pathology. Omphalocele. Gastroschisis. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p> <p>Hernias in children. Umbilical, inguinal hernias. Strangulated hernias. Acute scrotum.</p> <p>Diaphragmatic pathologies. Diaphragmatic hernia and eventration. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Specific features in newborns.</p>	2
5.	<p>Cervical cysts and fistulas. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications</p> <p>Vascular malformations and tumors. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.</p> <p>Pulmonary malformations in children. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p>	2
6.	<p>Urinary system malformations. Kidney, ureter, bladder, urethral malformations. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Infravesical obstruction.</p>	2
7.	<p>Principles of pediatric orthopedics. Musculoskeletal system malformations. Torticollis. Congenital clubfoot. Hip dislocation. Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.</p> <p>Traumas in children. Fractures in children. Specific characteristics of diagnosis and treatment. Obstetrical traumas. Abdominal traumas.</p> <p>Urinary tract traumas. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p>	2
8.	<p>Digestive hemorrhage in children. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p> <p>Superior digestive hemorrhage. Inferior digestive hemorrhage. Specific features in newborns, infants, babies.</p> <p>Liver and biliary malformations in children. Biliary atresia. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.</p>	2
9.	<p>Surgical infection in children. Purulent inflammatory pathologies of soft tissues. Extensive necrotic phlegmon. Furunculosis. Mastitis. Omphalitis. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p>	2
10.	<p>Acute hematogenous osteomyelitis in children. Epyemaphyseal osteomyelitis, chronic osteomyelitis. Arthritis. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p>	2



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Total hours	20
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B. Practical lessons:

Nr.	Theme	Hours
1.	Specific characteristics of Pediatric surgery. The examination methods in pediatric surgery. Esophageal and stomach diseases. Esophageal atresia. Tracheo-esophageal fistula. Hypertrophic pyloric stenosis. Definition. Embryology. Classification. Clinical presentation. Diagnosis. Differential diagnosis. Treatment. Complications. Congenital bowel obstruction. Duodenal obstructions. Small bowel malformations. Meconial ileus. Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.	5
2.	Anorectal and colonic malformations. Hirschsprung disease. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Acquired bowel obstructions. Intussusception. Peritoneal adhesions. Volvulus. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.	5
3.	Acute appendicitis in children. Peculiarities in infants, babies. Peculiarities of diagnosis and treatment. Peritonitis in children. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications. Specific features in premature infants, newborns, babies.	5
4.	Anterior abdominal wall pathology. Omphalocele. Gastroschisis. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Hernias in children. Umbilical, inguinal hernias. Strangulated hernias. Acute scrotum. Diaphragmatic pathologies. Diaphragmatic hernia and eventration. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Specific features in newborns.	5
5.	Cervical cysts and fistulas. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications Vascular malformations and tumors. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications. Bronchopulmonary malformations in children. Clinical signs. Diagnosis. Differential diagnosis. Treatment.	5
6.	Urinary system malformations. Kidney, ureter, bladder, urethral malformations. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Infravesical obstruction.	5
7.	Principles of pediatric orthopedics. Musculoskeletal system malformations.	5



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	<p>Torticollis. Congenital clubfoot. Hip dislocation. Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.</p> <p>Traumas in children. Fractures in children. Specific characteristics of diagnosis and treatment. Obstetrical traumas. Abdominal traumas. Urinary tract traumas. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p>	
8.	<p>Digestive hemorrhage in children. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Superior digestive hemorrhage. Inferior digestive hemorrhage. Specific characteristics in newborns, infants, babies.</p> <p>Liver and biliary malformations in children. Biliary atresia. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.</p>	5
9.	<p>Surgical infection in children. Purulent inflammatory pathologies of soft tissues. Extensive necrotic phlegmon. Furunculosis. Mastitis. Omphalitis. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p> <p>Acute purulent necrotizing pneumonia. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.</p>	5
10.	<p>Acute hematogenous osteomyelitis in children. Epiphyseal osteomyelitis, chronic osteomyelitis. Arthritis. Definition. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.</p> <p>Tumors in children. Specific features of tumors in children. Mediastinal and abdominal tumors. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.</p> <p>“Palpable tumor” syndrome. Teratoma. Neuroblastoma. Nephroblastoma (Wilms tumor).</p>	5
	Total hours	50

DETAILED SYLLABUS IN PEDIATRIC SURGERY

BRIEF HISTORY OF PEDIATRIC SURGERY

MODERN EXPLORATIONS IN SURGERY

Characteristics of pediatric surgery.

Organization of pediatric surgical care in the Republic of Moldova.

Pediatric surgery department. Particularities of newborn care.

The role of preventive examination in revealing of surgical diseases. Deontology in pediatric surgery.



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CERVICAL PATHOLOGY

Cervical cysts and fistulas. *Lateral bronchogenic cervical cysts and fistulas. Medial cervical cysts and fistulas.*

Acute cervical adenopathy. Definition. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Torticollis. *Cervical muscular torticollis.* Definition. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

BRONCHOPULMONARY MALFORMATIONS AND DISEASES IN CHILDREN

Pulmonary malformations. *Cystic pulmonary malformations. Bronchogenic cyst. Congenital lobar emphysema. Pulmonary sequestration. Agenesis. Aplasia. Hypoplasia.* Definition. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Operative techniques.

Chronic nonspecific pulmonary diseases. *Bronchiectasis.* Etiology. Pathogenesis. Pathomorphology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Special methods of investigation. Therapeutic tactic. Indication for surgical treatment. Tactics in diffuse bilateral bronchiectasis. Complications: atelectasis, collapse, bronchial fistulas, pleural empyema. Prevention. Therapeutic tactics. Prognosis. Follow-up.

DIAPHRAGMATIC PATHOLOGY

Diaphragmatic hernias and eventrations. *Left diaphragmatic hernias. Anterior and retroxiphoid hernias. Hiatal hernia. Traumatic diaphragmatic hernia in children.* Definition. Pathomorphology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Preoperative preparing. Postoperative treatment. Terms of surgical correction. Diaphragmatic hernias complications.

Congenital diaphragmatic hernia. Definition. Etiology and pathogenesis. Embryology. Pathologic anatomy. Physiopathology. Pathomorphologic and clinical classification. Clinical signs. Diagnostics. Differential diagnostic. Therapeutic tactics.

Congenital diaphragmatic hernia in newborns.

“Strangulated asphyxia” syndrome. Clinical signs. Diagnosis. Differential diagnosis. Therapeutic tactics. Operative techniques. Complications.

ABDOMINAL WALL PATHOLOGY

Hernias in children. Definition. Etiology and pathogenesis. Embryology. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Umbilical hernia. Paraumbilical hernia. Definition. Etiology and pathogenesis. Embryology. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Inguinal hernia. Clinical signs. *Inguinal hernia in boys. Inguinal hernia in girls.* Clinical signs. Differential diagnosis. Treatment. Complications.

Congenital pathology of the umbilical region. Embryology. Pathologic anatomy.



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Umbilical fistulas (granuloma, vitelline fistulas, urachus fistulas, complete and incomplete fistulas). Umbilical cysts. Enterocyst. Urachus cyst. Definition. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Omphalocele. Embryonic umbilical hernia in newborns. Umbilical cord hernia. Classification. Clinical signs. Diagnosis. Differential diagnosis. Therapeutic principles.

Laparoschisis (gastroschisis). Definition. Embryology. Clinical signs. Diagnosis. Differential diagnosis. Therapeutic principles.

Umbilical hernia in newborns. Inguinal hernia. Hydrocele. Embryology. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Therapeutic principles. Terms of surgical correction.

Strangulated umbilical hernia. Strangulated inguinal hernia. Clinical signs. Evolution. Diagnosis. Differential diagnosis. Treatment (conservative, surgical). Specific features in boys and girls.

“Acute scrotum” syndrome in children (spermatic cord torsion, appendix testis torsion, testis torsion). Etiology and pathogenesis. Pathologic anatomy. Clinical picture. Evolution. Complications. Diagnosis. Differential diagnosis. Treatment.

ESOPHAGEAL MALFORMATIONS: *Esophageal atresia. Tracheoesophageal fistula (H-fistula).* Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications. Rehabilitation of children with congenital esophageal pathologies.

CONGENITAL DISEASES OF STOMACH

Hypertrophic pyloric stenosis. Definition. Embryology. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.

CONGENITAL BOWEL OBSTRUCTION

Congenital bowel obstruction. Definition. Embryology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.

Congenital megacolon (intestinal agangliosis, Hirschsprung disease). Definition. Embryology. Etiology and pathogenesis. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.

Anorectal malformations. Definition. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications.

LIVER DISEASES.

CONGENITAL MALFORMATIONS OF THE BILIARY TRACT.

Biliary tract atresia and obstructive jaundice in newborns. Definition. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.



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Congenital cystic dilatation of choledochus. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Portal hypertension syndrome in children. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Intrahepatic and extrahepatic forms. Diagnosis. Differential diagnosis. Treatment.

ACUTE SURGICAL PATHOLOGY OF THE INTRAABDOMINAL ORGANS IN CHILDREN

Appendicitis in children. Acute appendicitis. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment. Complications. "Atypical" forms. Evolution peculiarities in infants, babies, and children. Preoperative preparation. Postoperative treatment.

Bowel obstruction in children. Etiology and pathogenesis. Classification. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Peritoneal adhesions. Etiology and pathogenesis. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

DIGESTIVE HEMORRHAGE IN CHILDREN

Superior digestive hemorrhage in children. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Inferior digestive hemorrhage in children. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

OBSTETRICAL TRAUMAS

Cephalohematoma. Skeletal traumas. Internals traumas. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

THORACO-ABDOMINAL TRAUMAS IN CHILDREN

Thoracic traumas.

Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Abdominal traumas. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

SURGICAL INFECTION IN CHILDREN

Surgical sepsis. Definition. Classification. Stages. Clinical picture

Newborns sepsis. Etiology and pathogenesis. Evolution and treatment peculiarities.

Purulent inflammatory diseases of soft tissues.

Newborns mastitis. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.



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Pseudofurunculosis. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Omphalitis. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Furuncle. Carbuncle. Adenitis. Adenophlegmon. Abscess. Panaritium. Phlegmon. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Acute paraproctitis. Chronic paraproctitis. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Acute adenopathy. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Felinos in children. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Extensive necrotic phlegmon of newborns. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Inflammatory diseases of bones and joints.

Hematogenous osteomyelitis in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Acute hematogenous osteomyelitis in newborns. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Specific features of epiphyseal osteomyelitis. Onset and evolution of specific features. Prognosis. Prevention. Complications.

Chronic osteomyelitis. Evolution. Diagnosis. Differential diagnosis. Treatment.

Atypical forms of osteomyelitis. Brodie's abscess. Ollier's aluminous osteomyelitis. Antibiotic osteomyelitis. Garre's sclerosing osteomyelitis. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Posttraumatic osteomyelitis. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Arthritis in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

PURULENT INFLAMMATORY DISEASES OF THORACIC ORGANS

Acute necrotic pneumonia (acute bacterial pulmonary destruction) in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Acute necrotic pneumonia in newborns. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.



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Mediastinitis. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Pneumomediastinitis in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Pericarditis in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Peritonitis in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Peritonitis in newborns. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

PEDIATRIC UROLOGY

SUPERIOR URINARY TRACT MALFORMATIONS (KIDNEY, PELVIS, URETER)

Kidney malformations (number, position, correlation, structure).

Number abnormalities: aplasia, hypoplasia, kidney duplication, accessory kidney.

Correlation abnormalities. Symmetric and asymmetric.

Structure abnormalities. Polycystic kidney. Solitary cyst.

Pelvic and ureteral malformations. Hydronephrosis. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment. **Hydronephrosis in newborns.** Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Bladder malformations.

Bladder exstrophy. Bladder diverticulum. Definition. Embryology. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Urethral malformations.

Epispadias. Hypospadias. Definition. Embryology. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Vesicoureteral reflux. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Genital malformations.

Vaginal process pathology in children. Cryptorchidism. Cysts.

Androgyny. Phimosis. Paraphimosis. Labial synechia. Definition. Embryology. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Varicocele. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.



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Hymen imperforation. Hydrocolpos. Hydrometrocolpos. Hematocolpos and hematometra. Ovarian cyst. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Kidney trauma. Bladder injury. Urethral injury. Definition. Etiology. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

PEDIATRIC ORTHOPEDICS AND TRAUMATOLOGY MUSCULOSKELETAL MALFORMATIONS

Congenital hip dislocation. Definition. Embryology. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. X-ray signs. Differential diagnosis. Treatment.

Congenital clubfoot. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

PEDIATRIC TRAUMATOLOGY

Fractures in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Folkman syndrome. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Epiphyseal fractures. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Spinal trauma in children. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

PEDIATRIC ONCOLOGY

Particularities of pediatric oncology. Definition. Etiology and pathogenesis. Pathologic anatomy. Classification. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Teratoma. Definition. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Neuroblastoma. Definition. Etiology and pathogenesis. Pathologic anatomy. Clinical signs. Diagnosis. Differential diagnosis. Treatment.

Retroperitoneal tumors: Wilms's tumor (nephroblastoma). Pathologic anatomy. Diagnostic. Differential diagnostic. Treatment.



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QUESTIONS FOR STATE EXAM IN PEDIATRIC SURGERY

1. Esophageal atresia. Definition. Pathologic anatomy. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
2. Hypertrophic pyloric stenosis. Definition. Pathologic anatomy. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
3. Congenital bowel obstruction. Definition. Pathologic anatomy. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
4. Duodenal atresia and stenosis. Definition. Pathologic anatomy. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
5. Congenital high bowel obstruction. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
6. Congenital low bowel obstruction. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
7. Meconium ileus. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
8. Congenital megacolon. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
9. Anorectal malformations. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
10. Gastroduodenal perforations in newborns. Etiology and pathogenesis. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
11. Bronchopulmonary malformations. Agenesis. Aplasia. Hypoplasia. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
12. Congenital lobar emphysema. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
13. Congenital pulmonary cyst. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
14. Congenital diaphragmatic hernia. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
15. Omphalocele. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
16. Hemangiomas in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
17. Lymphangiomas in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
18. Biliary tract atresia. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
19. Appendicitis in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.



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20. Specific features of acute appendicitis in infants and babies. Diagnosis. Differential diagnosis. Treatment.
21. Complications of acute appendicitis in children. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
22. Peritonitis in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
23. Peritonitis in newborns. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
24. Bowel intussusception in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
25. Parenchymatous organs injuries in newborns. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
26. Acute hematogenous osteomyelitis in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
27. Epimetaphyseal osteomyelitis in newborns. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
28. Extensive necrotic phlegmon of newborn. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
29. Acute purulent necrotic pneumonia in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
30. Pleuropulmonary forms of the acute purulent necrotizing pneumonia in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
31. Intestinal torsion in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
32. Congenital cervical cysts and fistulas. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
33. Omphalo-mesenteric canal pathology. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
34. Meckel's diverticulum pathology. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
35. Pelvioperitonitis in girls. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
36. Superior digestive hemorrhage in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
37. Inferior digestive hemorrhage in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
38. Mediastinal emphysema in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
39. Mediastinitis in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.



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40. Pericarditis in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
41. Processus vaginalis pathology. Hernia. Hydrocele. Enterocystoma. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
42. Bladder malformations. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
43. Urethral malformations. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
44. Hydronephrosis. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
45. Cryptorchidism. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
46. "Acute scrotum" syndrome. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
47. Nephroblastoma. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
48. Congenital muscular torticollis. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
49. Dysplastic acetabulum. Hip dislocation. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
50. Teratoma. Teratoblastoma. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
51. Acquired bowel obstructions in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
52. Tumors' peculiarities in children. Neuroblastoma. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
53. Portal hypertension syndrome in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.
54. Hypospadias. Epispadias in children. Definition. Etiology and pathogenesis. Classification. Clinical picture. Diagnosis. Differential diagnosis. Treatment.

V. Recommended literature:

- A. compulsory:

1. Grosfeld J.L., O'Neil J.A., Coran A.G., Fonkalsrud E.W. Pediatric Surgery, Sixth edition, Mosby, Elsevier, 2006, 2232 pp. (digital and hard copy)
2. Holcomb G.W., Murthy J.P. Ashcraft's Pediatric Surgery, Fifth edition. Saunders, Elsevier, 2010, 1097 pp. (digital copy)
3. Isakov Yi. Pediatric Surgery. T.1, 312 p. , 1988. T.2, 331 p.(U-7488, U-7489. 617-089. I-85.) biblioteca USMF „Nicolae Testemitanu”.



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- B. additional:

1. Docimo S.G., Canning D.A., Khoury A.E. The Kelalis-King-Belman Textbook of Clinical Pediatric Urology, Fifth edition, Informa Healthcare UK Ltd., 2007, 1426 pp. (digital copy).

VI. Teaching and learning methods

Discipline of Pediatric Surgery is taught in a classical manner: lectures and practical lessons. Theoretical lectures will be given by the course owners. At practical lessons students discuss topics according to the study plan, solve clinical cases.

VII. Suggestions for individual activity

Working with informational resources:

1. Read the lecture material on the topic.
2. Familiarize with the list of additional informational resources (books, monographs, scientific articles) on the topic.
3. Select the source of additional information on the topic.
4. Formulate conclusions regarding the importance of the topic studied.

VIII. Methods of assessment

At the end of the course in Pediatric Surgery students' knowledge is evaluated by written test, oral test and practical skills assessment.

Students have 20 minutes to answer the test.

Students who have not worked off absences are not admitted to the exam in Pediatric Surgery.

The State License Exam in Pediatric Surgery consists of written test and oral test.

The knowledge assessment is done on the basis of a 10-point scale from 1 to 10 with decimals, as following:

- "10" or "excellent" (ECTS-A equivalent) is given for mastering of 91-100% of the studied material;
- "9" or "very well" (ECTS-B equivalent) is given for mastering of 81-90% of the studied material;
- "8" or "well" (ECTS-C equivalent) is given for mastering of 71-80% of the studied material;
- "6" or "7" or "satisfactory" (ECTS-D equivalent) is given for mastering of 61-65% and 66-70% of the studied material respectively;
- "5" or "bad" (ECTS-E equivalent) is given for mastering of 51-60% of studied material;
- "3" and "4" (ECTS-FX) is given for mastering of 31-40% and 41-50% of studied material respectively;



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- “1” and “2” or “unsatisfactory” (ECTS-F equivalent) is given for mastering of 0-30% of the studied material.

The absence at the Exam is registered as “absence” and is qualified as “0”.

The student has the right to repeat a failed exam two times.

The assessment scale

The knowledge assessment is assessed using a 10-point scale, i.e. from “1” to “10” with decimals. The marks from “5” to “10” allow obtaining credits in conformity with the syllabus. The final mark results from the sum of the average annual marks and the final exam mark. The students who at the current evaluation have the average annual mark less than “5” are not admitted to the exam.

- “10” or “excellent” is given for deep and remarkable theoretical knowledge and practical skills mastered during the course, for creativity and abilities to apply them. The student masters 91-100% of the material included in the syllabus of the course.
- “9” or “very well” is given for demonstration of very good theoretical knowledge and practical skills mastered during the course, for very good abilities to apply obtained knowledge with some inessential errors. The student masters 81-90% of the material included in the syllabus of the course.
- “8” or “well” is given for good theoretical knowledge and practical skills, for satisfactory abilities to apply obtained knowledge and practical skills with some uncertainty and inaccuracy concerning the details of the course, but student can correct them by answering to the additional questions. The student masters 71-80% of the material included in the syllabus of the course.
- “6” and “7” or “satisfactory” are given for basic theoretical knowledge and skills and for the ability to implement them in typical situations. The student’s answer lacks certainty and there are considerable gaps in the course knowledge. The student masters 61-65% and 66-70% of material included in the syllabus of the course respectively.
- “5” or “bad” is given for minimal knowledge and practical skills of the course, their application is very difficult. The student masters 51-60% of the material included in the syllabus of the course.
- “3” or “4” are given when the student fails to demonstrate minimal requirements needed to pass the exam and the additional work is needed to pass it. The student masters 31-40% and 41-50% of the material included in the syllabus of the course respectively.
- “1” or “2” or “unsatisfactory” are given for copying or failure to demonstrate minimal knowledge (0-30%) in the field. To pass the exam a hard work is needed.

Methods of mark rounding

The average of current and final marks	Final mark
5	5
5,1-5,5	5,5
5,6-6,0	6



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6,1-6,5	6,5
6,6-7,0	7
7,1-7,5	7,5
7,6-8,0	8
8,1-8,5	8,5
8,6-9,0	9
9,1-9,5	9,5
9,6-10	10

Absence from examination without good reason shall be recorded as "absent" and is equivalent to 0 (zero). The student has the right to re-take the exam twice.

IX. Languages of study: Romanian, English, Russian, French