

**GUIDELINES
for practical classes
for students**

Educational discipline: Pediatrics, including medical practice (professional training) childhood diseases

Field of knowledge: 22 "Health care"

Specialty: 222 "Medicine"

Department of Pediatrics No 2

Approved at the meeting of the Department of Pediatrics No. 2 on August 26, 2024, protocol No. 1

Considered and approved by: Cyclic methodological commission for pediatric disciplines

dated August 29, 2024, protocol No 1

Subject of the lesson:

“ Functional and organic gastrointestinal diseases in children ”

Competencies:

Ability to collect complaints, history of life and disease and analyze clinical data in children with functional and organic gastro-intestinal diseases in children.

The ability to distinguish and identify leading clinical symptoms and syndromes in functional and organic gastro-intestinal diseases in children (colic, functional disorders accompanied by abdominal pain, peptic ulcer disease, inflammatory bowel diseases - Crohn's disease, ulcerative colitis).

The ability to determine the necessary list of instrumental studies for the diagnosis of most common functional and organic gastro-intestinal diseases in children.

The ability to establish a preliminary and clinical diagnosis of most common functional and organic gastro-intestinal diseases in children

Ability to determine the principles and nature of treatment most common functional and organic gastro-intestinal diseases in children

Ability to abstract thinking, analysis.

The ability to master and process modern knowledge.

Understanding the peculiarities of working with children of different ages.

The ability to make decisions when studying the discipline "Pediatrics, including medical practice (professional training) childhood diseases"

The purpose of practical class

Formation of students' professional competencies for achieving program learning outcomes by controlling the initial level of knowledge in the process of discussing theoretical issues and testing, performing practical tasks and conducting control of the final level of training in solving situational problems on diagnosis, treatment of most common functional and organic gastro-intestinal diseases in children.

Equipment: PC with appropriate information support, reference materials, methodological recommendations, extracts from medical histories, a set of laboratory and instrumental and laboratory test results (FEGDS, Ultrasound, pH determination etc), manikin.

Lesson plan and organizational structure

Stage name	Description of the stage	Levels of assimilation	Timing
Preparatory	<ul style="list-style-type: none">- Organizational issues- Learning motivation:	Introductory	25 min

	<p>Functional and organic diseases of the gastrointestinal tract in children (colic, functional disorders accompanied by abdominal pain, peptic ulcer disease, inflammatory bowel diseases - Crohn's disease, ulcerative colitis). Abdominal pain is the most common complaint of parents of small children who cannot yet talk about their feelings on their own. At an older age, abdominal pain syndrome is also evaluated ambiguously. It is common knowledge that up to 3-5 years of age, a child is not able to clearly localize pain and almost always experiences it in the form of a severe general reaction. According to the Rome IV criteria (2016), functional gastrointestinal disorders are divided into 2 groups: G and H. Group G includes functional gastrointestinal disorders in young children, and group H includes gastrointestinal disorders found in children and adolescents.</p> <p><i>Control of the initial level of knowledge - test control and oral survey.</i></p> <p><i>Examples of test tasks:</i></p> <p>1. Treatment of irritable bowel syndrome (a variant with constipation) involves the appointment of:</p> <ul style="list-style-type: none"> A. antispasmodic drugs B. analgesics C. adsorbents D. Laxatives with a hydrophilic effect <p>2. Ulcerative colitis is characterized by an erosive-ulcerative lesion:</p> <ul style="list-style-type: none"> A. mucous membrane of the stomach; B. mucous membrane of the gall bladder; C. of the mucous membrane of the large intestine; D. mucosa of the small intestine. <p>3. Crohn's disease is a granulomatous lesion:</p> <ul style="list-style-type: none"> A. colon; B. pancreas; C. small intestine; D. the gastrointestinal tract. <p>4. In Crohn's disease, the symptoms of damage to the upper gastrointestinal tract are:</p> <ul style="list-style-type: none"> A. heartburn 	Reproductive	
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	<p>B. epigastric pain C. pain in the projection of the gallbladder D. dysphagia 5. Functional intestinal disorders in children include: A. Crohn's disease B. celiac disease C. irritable bowel syndrome D. chronic enteritis</p>		
Main	<p>Formation of professional competences:</p> <ul style="list-style-type: none"> - demonstration of a thematic patient or review of extracts from medical histories of patients with functional and organic gastro-intestinal diseases in children - evaluation of the results of instrumental and laboratory studies; - on the basis of anamnesis, data of a clinical examination and the results of laboratory studies, the establishment of a preliminary clinical diagnosis - determining of factors and pathogenetic mechanisms of disease development; - appointment of treatment and management of the disease; 	<p>Introductive Reproductive Creative Reproductive Creative Reproductive Creative</p>	125min
Final	<p><i>Control of the final level of preparation (Clinical cases):</i></p> <p>Task 1. The child is 3 years old. Complaints of repeated vomiting during the second day, nausea, slight loosening of the stool, general weakness, refusal to eat and drink liquids. This state of the child's mother cannot be attributed to any reason, but notes the worsening of the condition after nervous stress. When collecting a thorough anamnesis, it was found that a similar situation was noted 2 weeks ago against the background of a pronounced negative reaction of the child to the need to go to kindergarten. Previous diagnosis? The reason for this condition? Examination plan? A treatment plan?</p> <p>Answer standard Cyclic vomiting syndrome, nervous stress</p>	Creative	30 min

- 2) determination of laboratory indicators of electrolytes, glucose, urea nitrogen, creatinine
3) ondasetron IV

Task 2. The boy is 12 years old, he has been under the dispensary registration of a psychiatrist since he was 7 years old, for the past 5 years he has been complaining of delayed bowel movements up to 1-2 times a week, with prolonged straining, a feeling of incomplete emptying of the intestines, a change in the shape and nature of the stool: hard, dry, like "sheepish", ribbon-like. Objectively: Integuments of normal color, clean. The abdomen is soft, painful during palpation along the course of the intestine, the loops of the intestine are spasmodic. The liver is not enlarged. During FGDS, ultrasound, no pathology was detected, colonoscopy: pain during air insufflation, increased vascular pattern of the mucosa, mucus coating, high rigid folds, physiological sphincters with increased tone 1. Formulate the diagnosis and justify it. 2. Assign an examination plan 3. Assign treatment to this child

Answer standard

IBS with a predominance of constipation. Clinical blood analysis, clinical urine analysis, coprological examination, irrigography, manometry. It is recommended to take unrefined products, a sufficient amount of ballast substances in the diet (bread from coarsely ground flour, with the addition of bran, vegetables, fruits). Drugs that normalize intestinal peristalsis (prokinetics) - motilium; Laxatives that have a hydrophilic effect: Laminarid, Naturo lax, Mucofalk, Forlax, dry seaweed, Dulcolax

Task 3 A 5-year-old boy was admitted to the department with complaints of increased body temperature, abdominal pain, often up to 10-12 times a day, bowel movements with impurities of mucus and blood. Objectively: pronounced features of nonspecific intoxication: paleness, icteric skin, when palpating the abdomen - pain along the course of the colon, spasmodic loops of

	<p>the intestine, enlarged, dense liver, splenomegaly, stools are accelerated, thin, with macroscopic blood, mucus and pus. The examination was carried out: clinical blood analysis: anemia, neutrophilic leukocytosis with a shift to the left, accelerated ESR; biochemical examination of blood: hypoproteinemia, hypoalbuminemia, decrease in the level of C-reactive protein, decrease in iron and blood electrolytes; co-program: positive Tribule reaction with chloroacetic and trichloroacetic acids, mucus, leukocytes, erythrocytes; endoscopic examination: pronounced edema and hyperemia of the mucous membrane, absence of a vascular pattern, granularity of the mucous membrane, pronounced contact bleeding, separate erosions and erosive fields under fibrin, microabscesses; 1. Formulate the diagnosis and justify it. 2. Assign treatment to this child</p> <p>Answer standard: UC, moderate form, acute course, active stage. Diet, 5-ASK, sulfasalazine, salazopyridazine, adsorbents, anticholinergic drugs, antispasmodics, sedative therapy, enzyme drugs.</p> <p><i>General assessment of educational activity</i></p>		
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Recommended Books

1. Nelson Textbook of Pediatrics, 2-Volume set, 21-th edition. By Robert M. Kliegman, Bonita M.D. Stanton, Joseph St. Geme and Nina F Schor. – Philadelphia, PA : Elsevier Inc., 2020 - 4264 p. (1973-1987)
ISBN-10 : 032352950X ISBN-13 : 978-0323529501
2. Pediatrics : textbook / O. V. Tiazhka, T. V. Pochinok, A. M. Antoshkina [et al.] ; edited by O. Tiazhka. – 3 rd edition, reprint. – Vinnytsia : Nova Knyha, 2018. – 544 pp. (pp. 364-375) : il. ISBN 978-966-382-690-5

Additional

1. Thangam Venkatesan, Carmen Cuffari / Cyclic Vomiting Syndrome [Електронний ресурс] - Medscape (2023). Режим доступу: <https://emedicine.medscape.com/article/933135-overview>

2. Stephen M Borowitz, Carmen Cuffari / Pediatric Constipation [Электронный ресурс] - Medscape (2023). Режим доступа:
<https://emedicine.medscape.com/article/928185-overview>

3. Steven M Schwarz, Carmen Cuffari / Pediatric Gastroesophageal Reflux [Электронный ресурс] - Medscape (2024). Режим доступа:
<https://emedicine.medscape.com/article/930029-overview>

4. Mohammad F El-Baba, Carmen Cuffari / Pediatric Irritable Bowel Syndrome (IBS)[Электронный ресурс] - Medscape (2022). Режим доступа:
<https://emedicine.medscape.com/article/930844-overview>

Questions for student self-preparation for practical classes

1. Etiology, prevalence and risk factors for the formation of functional and organic diseases of the gastrointestinal tract in children (colic, functional disorders accompanied by abdominal pain, peptic ulcer, inflammatory bowel diseases - Crohn's disease, ulcerative colitis)
2. Classification of functional and organic diseases of the gastrointestinal tract in children.
3. Classification of functional gastrointestinal disorders in children (Rome IV criteria).
4. Diagnostic criteria of the main functional disorders of the gastrointestinal tract, which are accompanied by abdominal pain
5. Gastric ulcer and peptic ulcer disease in children: definition, classification, diagnosis
6. Algorithm for diagnosis and treatment of helicobacter infection in children.
7. Inflammatory bowel diseases in children: features of the course, diagnosis and treatment

Methodical guidelines have been created as.prof. Iemets O.V.