BOHOMOLETS NATIONAL MEDICAL UNIVERSITY

GUIDELINES
for practical classes
for students

Educational discipline: «Pediatric gastroenterology, pulmonology and nephrology»

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:

" The most common diseases of the esophagus, stomach and duodenum in children (GERD, cyclic vomiting syndrome, chronic gastritis, chronic duodenitis) "

Competencies:

Ability to collect medical information about the child and analyze data (complaints, life history, medical history)
The ability to distinguish and identify the leading clinical symptoms and syndromes of the most common diseases of the esophagus, stomach and duodenum in children.
The ability to determine the necessary list of laboratory and instrumental studies for diagnosis of the most common diseases of the esophagus, stomach and duodenum in children and to evaluate their results.
The ability to determine the necessary list of laboratory and instrumental studies for the diagnosis of the most common diseases of the esophagus, stomach and duodenumin children and to evaluate their results.
The ability to establish a preliminary and clinical diagnosis of the most common diseases of the esophagus, stomach and duodenum in children.
The ability to determine the principles and nature of the treatment of the most common diseases of the esophagus, stomach and duodenum in children and the prevention of these diseases.
Ability to diagnose emergency conditions.
Ability to determine tactics and provide emergency medical care.
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 "Fundamentals of pediatric gastroenterology, pulmonology and nephrology"

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 and prevention of the most common diseases of the esophagus, stomach and duodenum in children.

Equipment: PC with appropriate information support, reference materials, methodological recommendations, extracts from medical histories, a set of laboratory test results, manikin.

Lesson plan and organizational structure

Stage name	Description of the stage	Levels of assimilation	Timing

Prepa-ratory	- Organizational issues - Learning motivation: The prevalence of diseases of the upper part of the alimentary canal in children is a rather urgent problem. Among them, the most common pathology is diseases of the esophagus, stomach and gastrointestinal tract (GERD, cyclic vomiting syndrome, chronic gastritis, chronic duodenitis). In practice, a pediatrician often encounters children with chronic diseases of the digestive system. Timely diagnosis, differential diagnosis and treatment of these diseases significantly improves the quality of life of patients *Control of the initial level of knowledge - test control and oral survey.* ***Examples of test tasks:*** **1. The main examinations for the verification of inflammatory changes in the stomach and duodenum are:** A. Ultrasound and electrogastrography B. FGS and ultrasound S. intragastric pH-metry D. FGDS with morphological study of biopsies of mucous membrane **2. What is considered an indication for surgical treatment of GERD?** A. complicated course of GERD (III IV degree of esophagitis); B. inflammatory swelling of the abdominal part of the esophagus; C. inflammatory swelling of the abdominal part of the esophagus and isolated erosions; D. pronounced esophageal manifestations. **3. What foods should be excluded from the diet for GERD?** A. porridge; B. tomatoes; C. cucumbers; D. potatoes.	Introductory Reproductive	15 min

	4. Indicate where the new classification of chronic gastritis and chronic duodenitis is presented? A. Sydney classification; B. Maastricht Consensus; C. Kyoto Consensus; D. Roman criteria. **5. Chronic gastritis is a chronic recurrent inflammation characterized by:** A. staging and gradual development of glandular atrophy apparatus of mucous membrane B. the presence of an ulcerative defect on the mucous membrane C. the absence of endoscopic changes on mucous membrane D. lack of disease progression		
Main	Formation of professional competences: - demonstration of a thematic patient or review of extracts from medical histories of patients with the most common diseases of the esophagus, stomach and duodenum; - evaluation of the results of 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;	Introductive Reproductive Creative Reproductive Creative Reproductive Creative	100 min
Final	Control of the final level of preparation (Clinical cases): **Task 1.** The child is 12 years old, 10 days old and receives in hospital treatment. She came in with complaints of periodic pain in the upper part of the abdomen, of an aching nature, after eating. Abdominal palpation is not painful. From the life history: the child is observed by an allergist for atopic dermatitis, bronchial asthma. A burdened heredity: the child's father has UDS. The examination was carried out: FGDS with biopsy	Creative	20 min

	of the MM: lymphocytic-eosinophilic infiltration of the MM, 10-15 eosinophils in the field of view, stroma fibrosis, proliferation of collagen fibers in the own plate of the MM. Immuno CAP - allergy diagnosis: intolerance to casein protein, albumin protein. 1. Formulate the diagnosis and justify it. 2. Prescribe treatment **Answer standard** 1. Functional dyspepsia, epigastric pain syndrome Allergic gastritis. 2. Diet excluding allergenic proteins, PPIs, leukotriene receptor inhibitors **Task 2.** A 16-year-old child was undergoing inpatient treatment for chronic Hp-associated gastritis. She was admitted to the hospital for a follow-up examination a month after anti-helicobacter therapy. There are no complaints. The anamnesis is burdensome - the father has gastric ulcer, the grandfather has stomach cancer. During palpation, the abdomen is soft, painless. A control C13 Breath test for H. pylori was carried out - positive. 1. Patient management tactics. **Answer standard** FGDS+ 6 biopsies for morphological examination and 2 biopsies for diagnosis of HP with mandatory determination of sensitivity to antibiotics **Task 3.** A 16-year-old child has been complaining of heartburn and hiccups for a year. It is known from the anamnesis that the child was repeatedly treated by an otolaryngologist doctor for otitis during the year. Objectively: the skin is of normal color, clean. The abdomen is soft on palpation, painful in the epigastrium. The liver is not enlarged. FGDS: the mucous membrane of the esophagus in the lower third is hyperemic, swollen, ulcerated. Cardia does not close. Breath test for Helicobacter pylori: negative. Daily pH monitoring: number of refluxes 70 per day, pH 4.0. 1. Formulate the diagnosis and justify it. 2. Prescribe treatment. **Answer standard** 1. GERD. Reflux esophagitis of the 4th degree. 2. PPI. E. Appointment of anticonvulsant drugs		

	General assessment of educational activity		

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. (pp. 1930-1950)
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. 364-385) : il. ISBN 978-966-382-690-5

Additional:

1. Malfertheiner P. etal. Managementof Helicobacter pylori infection — the Maastricht V. Florence Consensus Report. Gut Online First. 2016. P. 1-26. doi: 10.1136 / gutjnl-2016-312288.
2. Katz, Philip O. MD, MACG1; Dunbar, Kerry B. MD, PhD2,3; Schnoll-Sussman, Felice H. MD, FACG1; Greer, Katarina B. MD, MS, FACG4; Yadlapati, Rena MD, MSHS5; Spechler, StuartJon MD, FACG6,7. ACG Clinical Guideline for the Diagnosis and Management of Gastroesophageal Reflux Disease. The American Journal of Gastroenterology: January 2022 - Volume 117 - Issue 1 - p 27-56, doi: 10.14309/ajg.0000000000001538

Questions for student self-preparation for practical classes

1. Diagnostic criteria for cyclic vomiting syndrome (Rome criteria IV). Algorithm of patient management depending on the clinical period of the disease.

2. Definition, etiology, pathogenesis, classification and principles of diagnosis and treatment of GERD in children.

3. Definition, etiology, pathogenesis, classification and principles of diagnosis of chronic gastritis and chronic duodenitis in children.

4. Features of diagnosis and eradication therapy of helicobacter infection in children.

Methodical guidelines have been created as.prof. Horobets N.I., as prof. Iemets O.V.