1. ACTUALITY
In the daily practice of pediatrician often faced with children which have chronic diseases of the digestive system. Timely diagnosis and treatment of these diseases significantly improves the quality of life of sick children. Prevalence of gastrointestinal diseases from 0 to 14 years is 79.3 in 1,000 children with the rise of 5-6 and 9-12 years. Diseases of the stomach and duodenum among the most common diseases the digestive system in children and account for 58-76% of the pediatric gastroenterology pathology. Of these functional digestive disorders - 20%; chronic gastro - 50%; chronic gastritis - 4%; chronic duodenitis - 2%; peptic ulcer (VHSH) and duodenal ulcers (DU) - 5.6%; biliary tract disease - 22%; The structure of the digestive pathology on the fate of ulcer disease accounted 1,7-16 %. Prevalence of ulcer disease among children is 0,4-4,3. Peak incidence occurs in 9-11 years in girls and 12-14 years - boys. Hereditary predisposition ulcers occurs in 45-75% of patients. The vast most cases occur in children DU - 82-87% VHSH - 11-13%, coupled form - VHSH and duodenum - 4-6%. In acute ulcer usually manifested recurrent ulcers (acute erosion), often associated with Helicobacter Pylori (HP + VHSH - 68-70% cases, HP + DU - 88-98% of cases).

2. THE AIM
To be able to determine the etiologic factors and pathogenic mechanisms of organic gastrointestinal disorders in children, prescribe appropriate treatment, prevention recommendations and determine prognosis.

3. EDUCATIONAL OBJECTIVES
The student should know:
- Determine the etiologic and pathogenetic factors of the most common organic diseases of the esophagus, stomach and duodenum in children
- To classify and analyze the typical clinical picture of organic disease esophagus, stomach and duodenum in children
- Demonstrate the principles of treatment, rehabilitation and prevention of organic digestive tract diseases in children
- Treatment and prevention of gastroesophageal reflux disease, gastritis, duodenitis, peptic ulcer disease in children
The student should be able to:
- To collect anamnesis for a patient with organic ahvoryuvannyamy alimentary canal
- Conduct consistent examination of the child to determine the nature of the lesion gastrointestinal tract
- Conduct an objective examination of the patient with age-appropriate and interpret the data
- Analyze the main symptoms of organic diseases of gastrointestinal tract in children (Dyspeptic, pain, gastrointestinal bleeding)
- Draw up a plan of examination and analyze information of laboratory and instrumental investigations at typical motion of organic digestive tract disorders in children
- Demonstrate the principles of treatment, rehabilitation and prevention of organic gastrointestinal disorders in children
- Put a preliminary diagnosis of organic diseases of the esophagus and the stomach duodenum in children
- Provide life prognosis in organic diseases of the upper gastrointestinal feed the children
- Conduct a differential diagnosis of functional and organic diseases digestive tract in children
- Prescription for main groups of drugs
- Develop creativity in the laboratory, clinical examination of the child, theoretical study of the topic issues
- Demonstrate the moral and ethical principles of medical and professional principles of professional subordination in pediatric gastroenterology

4. INTEGRATION

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5. MATERIALS
5.1. Gastroesophageal reflux disease (GERD)

In clinical pediatric GERD term denoting all cases of pathological maligns stomach contents into the esophagus, where there are morphological changes mucosa and developing esophageal reflux esophagitis. Pathological GER is considered only in cases where oesophageal pH reaches 4.0 or less, exceeding 4,2-5% of the time monitoring. also pathological reflux considered if it's longer than 5 minutes. The main factors influence the development of pathological GER, is a violation of normal operation the lower esophageal sphincter (lower esophageal sphincter deficiency, frequent episodes of transient lower esophageal sphincter relaxation) violation of the processes of neutralization of hydrochloric acid, lower esophageal clearance and mucosal resistance, increasing the frequency and duration of reflux episodes.

In children, in addition to these causes of GERD may contribute to the dysfunction of the autonomic nervous system, rapid growth, weak connective tissue structures organism genetic predisposition. The clinical picture of the disease usually distinguished esophageal (oesophageal) and extraezophageal symptoms. GERD in children is characterized by such symptoms of esophageal lesions concierge vomiting, regurgitation, belching, hiccups. Later, joined by symptoms such as sense of bitterness in the mouth, heartburn, chest pain, dysphagia. Typically, symptoms such as heartburn, chest pain in the neck and back, there are inflammatory changes esophageal mucosa, ie with reflux esophagitis.

By atypical manifestations of GERD include respiratory (cough, shortness of breath that often occur in the supine position), Otolaryngology (hoarseness, salivation), stomach (rapid saturation, bloating, nausea, vomiting), dental (Glossitis, defeat red border of the lips and teeth ') and symptoms of cardiovascular system.

Complications of GERD in childhood is rare.
The most frequent in severe GERD is peptic ulcer, erosive esophagitis, which occurs in 2-7% of cases. A relatively rare complication of GERD - stricture of the esophagus, which occurs when scar healing of ulcers. One of the most serious complications of GERD have Barrett's esophagus. In literature Barrett's esophagus is treated as a complex morphological and shows clinical picture of severe GERD, cell heterotopiyeyu gastric mucosa and / or small intestine in the esophagus and in some cases the formation of erosions or ulcers the esophagus. This disease is most authors regarded as a complication of GERD, although not rule out the possibility of forming metaplasia innate nature.
Diagnosis of GERD based on clinical data and results of studies detect pathological GER. To detect pathological GER today use following methods: x-ray with barium, pH meters, fibroesophagogastroduodenoscopy (FEHDS) with biopsy, scintigraphy. This steady increasing the number of invasive methods of examination in children, the diagnostic value of which, with the requirements of evidence-based medicine should be justified.

1. Diet therapy.
2. Drug therapy is aimed for:
   a) normalization of peristaltic esophageal and stomach;
   b) restoration and normalization of acid-forming function of the stomach;
   c) restoration of the structure esophageal mucosa, fighting with inflammatory changes arising from the mucosa.

With older children diet excludes foods that increase peristalsis and reflux (coffee, chocolate, fatty and spicy foods, etc.). Children should explain the adverse effects of tobacco smoke and alcohol on the mucosa esophageal sphincter and cardiac status and eliminate smoking, chewing gum and use alcoholic beverages.

The basis of therapeutic measures in gastroesophageal reflux is postural therapy (treatment provisions) aims to reduce the degree of reflux, it helps accelerate esophageal emptying of gastric contents, which reduces the risk of inflammation and respiratory complications. Postural therapy should take not just during meal and a short time after, but throughout the day, both day and night.

5.2. Gastritis, gastro, peptic ulcer and duodenal ulcer.

The pathogenesis of gastroduodenal diseases:
- prolonged exposure to harmful factors on the mucosa;
- protective mucosal barrier damage, breach of regeneration epithelial dystrophy, metaplasia;
- changes in cell ultrastructure of glandular stomach apparatus;
- of central and endocrine regulation;
- discoordination between the processes of excitation and inhibition;
- changes in motor function of the digestive canal;
- breach acid;
- reducing the production of protective mucus;
- colonization of mucosal Helicobacter pylori.

Clinic chronic gastroduodenal diseases

Pain syndrome.
Dyspeptic syndrome
- changes in appetite (increased, maintained, reduced, favoring certain dishes);
- constipation or diarrhea;
- signs of vascular dystonia;
- heartburn, nausea, vomiting and belching.
Intoxication syndrome
- signs of vegetative-vascular dystonia;
- headache;
- fatigue.

Chronic gastritis - chronic inflammation of the gastric mucosa, which is accompanied by physiological regeneration of the epithelium and therefore it atrophy, disorders of the secretory, motor and often inkretornoyi function. So, defining feature of this...
Disease is the morphological changes of gastric mucosa, because of specific clinical features of chronic gastritis not, and any expression disease may be missing. Peptic ulcer and duodenal ulcer - a chronic relapsing disease, the main local manifestation of which is ulcerative mucosal defect stomach or duodenum, which in some patients is complicated threatening life consequences (perforation, bleeding). Laboratory and instrumental methods of diagnosis: Esofibroastroduodenoskopya, x-ray, fractional study of gastric juice, pH meters, electrogastrogram, histology biopsy mucosal examination for Helicobacter pylori, coprogram, analysis fecal occult blood test, blood chemistry (alkaline phosphatase, AST, ALT, amylase, glucose), determination of hormones in the blood serum (gastrin, secretin, insulin, somatostatin etc). A prerequisite in determining the histological changes of gastric mucosa is 2 taking biopsies from the front and rear walls apart antrum and body of stomach (of 8 biopsies).

Evaluation criteria for measuring pH E. Linara using parenteral secretion stimulators.

Basal secretion, gastric body, normatsydnist - pH 1.6-2.6
Stimulated secretion, gastric body, normatsydnist - pH 1.21-2.0
Parenteral stimulants: histamine 0.1% (0.01 mg / kg); 0.025% pentagastrin (6 micrograms / kg)

Differential diagnosis:
- functional disorders of the digestive tract;
- disease hepatobiliarny zone;
- acute and chronic pancreatitis;
- atypical forms of acute appendicitis;
- worm infestation;
- pyelonephritis;
- congenital anomalies of the intestines and mesentery.

General principles of treatment of chronic gastritis, gastroduodenitis

Diet therapy for sparing mode with a quick transition to full food.

Drug treatment:
b) improve resilience and trophic mucosa;
c) Correction of motor-evacuation function;
d) normalization secret functions (stimulation or inhibition of acid)
f) eradication of Helicobacter pylori.

Phytotherapy.

Spa treatment.

Chronic gastritis with decreased secretion

Special treatments:
- In 3-4 weeks prescribed mechanically and thermally sparing diet (as a puree) small meals 5-6 times a day; then diet №2, including strong activators of secretion, fruit and vegetable juices;
- Replacement Therapy (natural gastric juice, hydrochloric acid with pepsin, pepsydyl, atsydyn-pepsin;
- stimulating therapy plantahlyutsyd (plantain juice), juice of cabbage, euflillin.

Chronic gastritis, gastroduodenitis with high (unchanged) secretion, ulcer

Diet 1a, 1b, 1, 5;
Normalization motility
motilium (domperidone). Children prescribed drug in tablets of 0.25 mg per 1 kg body three times a day for 15-20 minutes before meals. When failure motilium within 10 days should double dose. The average duration - 1 month.

Control of acid

Antacids that neutralize not only HCl but obvolakuyuchi have, adsorbent properties, increase the speed of evacuation of stomach spasms keeper ago reduce pain.

The scheme of eradication therapy.

For the eradication of Helicobacter pylori using 3 and 4 on the circuit component Denol basis and / or omeprazole and two antibiotics.

The course lasts 7 days eradication. Use the following doses:

- De-nol - 8 mg / kg / day in 2 divided doses;
- Flemoksyn - 50 mg / kg / day in 2 divided doses;
- Clarithromycin - 15 mg / kg / day in 2 divided doses;
- Furazolidone - 10 mg / kg / day in 3 divided doses;
- omeprazole (Neksium) - 0.5-1.0 mg / kg / day in the evening

After treatment course of rehabilitation therapy:

- Bifi-forms complex (on 1 tab. 2 times a day). The course of treatment 15 days;
- Multytabs 1 to 1 ton per day. The course of treatment 30 days;
- Motilium 0.3 mg / kg (single dose) three times a day for 15-20 minutes before meals. Course 15 days of treatment;

An obligatory condition cure a sick child is a survey of all household members living with the child and their treatment in the case of confirmation carrier H.pylori. Use monotherapy defective circuits leads to rapid eradication H.pylori of resistance to antibiotics and the lack of effect.

6. Materials methodological support classes

6.1. Quiz

2. Anatomical and physiological characteristics of the digestive system in children.
4. etiological and pathogenetic factors of GERD in children.
5. Classification, clinical course options for GERD, treatment and prevention.
8. The role of Helicobacter pylori in chronic gastroduodenal diseases.
9. Clinical signs of chronic gastritis with increased acid production.
10. Clinical features of chronic gastritis with reduced acid production.
11. Clinical signs of chronic gastroduodenitis.
15. Current circuit eradication therapy.
16. Family gelikobakterioza treatment principle.
17. The principles of restorative therapy.
20. Weather in the presence of a child gastritis, gastro, gastric ulcer and duodenal ulcers, gastroesophageal reflux disease.

6.2. MCQ’s
A child under the age of 14, which for 5 years suffering from peptic ulcer disease, appeared lethargy, nausea, vomiting blood, ground, dizziness. The child's condition heavy. What examination is the most important treatment strategy to address?
A. Ro-gram of abdomen
B. Koprogramm
C. Complete blood count
D. Duodenal sensing
E. Fibrohastroduodenoscopy*

6.3 Case
Girl 11 years is sick for a year, complaints of epigastric pain that appears and in the morning on an empty stomach 1,5-2 hours after eating, at night, bought the meal. Worried belching sour. Stool regularly executed. For the first time turned to the doctor a week ago, after FEHDS outpatients, hospitalized. In the girls mother and grandmother on the maternal side - ulcer 12 duodenal ulcer. IN -hastryt father. Obstetric and early history is not burdened. Specialized studies in School days to a week, 3 times a week engaged in choreography. The nature - introvert.

OBJECTIVE: height 148 cm, weight 34 kg, skin pale pink and clean. When the superficial palpation minor muscular abdomen marked epigastric Défense. With deep palpation marked by pain in the epigastric area and piloroduodenalnoy symptom Mendel positive. Also, at the point marked pain de Jardin, Mayo-Robson. The liver is not increased painless. From the other organs and systems pathology were found.
Complete blood count, Hb - 128 g / l, KP - 0.91, erythrocytes -4,2h1012 / L, white blood cells - 7,2h109 / L, n - 3% p - 51%, is - 3% L - 36%, m - 7%, ESR - to mm / h.
Urinalysis: color - straw-yellow, transparent, pH - 6.0, the relative density - 1.017, protein - no sugar - no epithelium - in No. 1-2 / out, leucocytes - 2-3 in p / a.
Biochemical blood test: whole protein - 72 g / L, ALT - 19 U / L, ACT - 24 U / L, ALP - 138U / L (normal 70-140), amylase - 100 U / L (normal 0-120), thymol test - 4, bilirubin:total -15 mmol / liter, direct - 3 mmol / l. FEHDS: pink mucosa of the esophagus, cardia closed. In the stomach, cloudy mucusmucosa focal flushed in the antrum has numerous protrusions, different size. The mucous membrane of duodenum bulb - focal-flushed, swollen at back of the visualized ulcerative defect 0,8x0,6 cm, round shape, with a roller congestion, the bottom is covered with fibrin. Take a biopsy. Ultrasonography of the abdomen, liver not enlarged, homogeneous parenchyma, echogenicity not changed. Gall bladder is a pear-shaped 55x21 mm inflection in the bottom content his uniform wall thickness of 1 mm. Pancreas: head - 21 mm (normal 18), the body- 15 mm (normal 15), tail - 22 mm (normal 18). Echogenicity head and tail lowered, pin Straits slightly expanded. pH meter, glucose - the body pH 2.4 in antrum - 4.2 after 30 minutes. after stimulation with 0.1% solution
histamine in a dose of 0.008 mg / kg in body pH - 1.4 to -2.8 antrum. Respiratory urease test: positive. Biopsy test on HP-infection: positive (++).
Task:
2. Ask the differential diagnostic algorithm.
4. Dayte assess the results of ultrasound. What degree of informativeness ultrasound to establish diagnosis?
5. Prescribe treatment regimen given to the child.