Federal State Budgetary Educational Institution of Higher Education

«North-Ossetia State Medical Academy»

of the Ministry of Healthcare of the Russian Federation

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Guidelines for conducting a practical lesson with 6th year students of the Faculty of Medicine on the topic:

DIFFERENTIAL DIAGNOSTICS IN GASTRIC DYSPEPSY SYNDROME. FUNCTIONAL DISPEPSIA, CHRONIC GASTRITIS, ULCER DISEASE

(the duration of the lesson is 8 hours, the second lesson is 4 hours)

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DIFFERENTIAL DIAGNOSTICS IN GASTRIC DYSPEPSY SYNDROME. ULCER DISEASE

Purpose of the lesson:

to determine the features of the pathogenetic mechanisms of the occurrence of peptic ulcer in a particular patient; to conduct a differential diagnosis of the genesis of ulcerative lesions; to study the methods of research of patients with peptic ulcer and to substantiate the plan of examination in a particular patient; to study the methods of drug and non-drug treatment of peptic ulcer, to substantiate the treatment plan for a particular patient.

Motivation for the relevance of the topic:

Peptic ulcer is one of the most common diseases of the internal organs. According to clinicians, its prevalence among the adult population is currently 7-10%. This disease affects people at the most active, creative age, often causing temporary and sometimes permanent disability. This disease is more common in urban residents than in rural areas. Men suffer from peptic ulcer 2-3 times more often than women, which is especially noticeable in the group of young patients. Every year in our country under dispensary supervision there are more than 1 million patients with peptic ulcer, every second undergoes inpatient treatment. The frequency of complications of peptic ulcer leading to long-term and permanent disability, and sometimes death, ranges from 26.5 to 42.3%. In this regard, peptic ulcer disease is one of the important medical and social problems of internal medicine.

Determining the level of preparation of students:

The second and third levels of knowledge: methods of control - a written survey (20 min). Students should know the main issues of etiology, pathogenesis, clinic and diagnosis of peptic ulcer, differential diagnostic differences between symptomatic gastroduodenal ulcers and peptic ulcer, the main groups of antiulcer drugs, their mechanisms of action; students should be able to - possess propaedeutic skills, independently identify the main syndromes - pain, dyspeptic, astheno-neurotic, make a preliminary diagnosis according to the accepted classification, determine the required amount of research and be able to interpret the data of additional research methods - laboratory (complete blood count, b / x analysis blood, feces for occult blood, analysis of fractional gastric sounding, intragastric pH-metry, biopsy results, etc.) and instrumental (ultrasound of internal organs, fluoroscopy of the stomach, FGDS with determination of Hp).

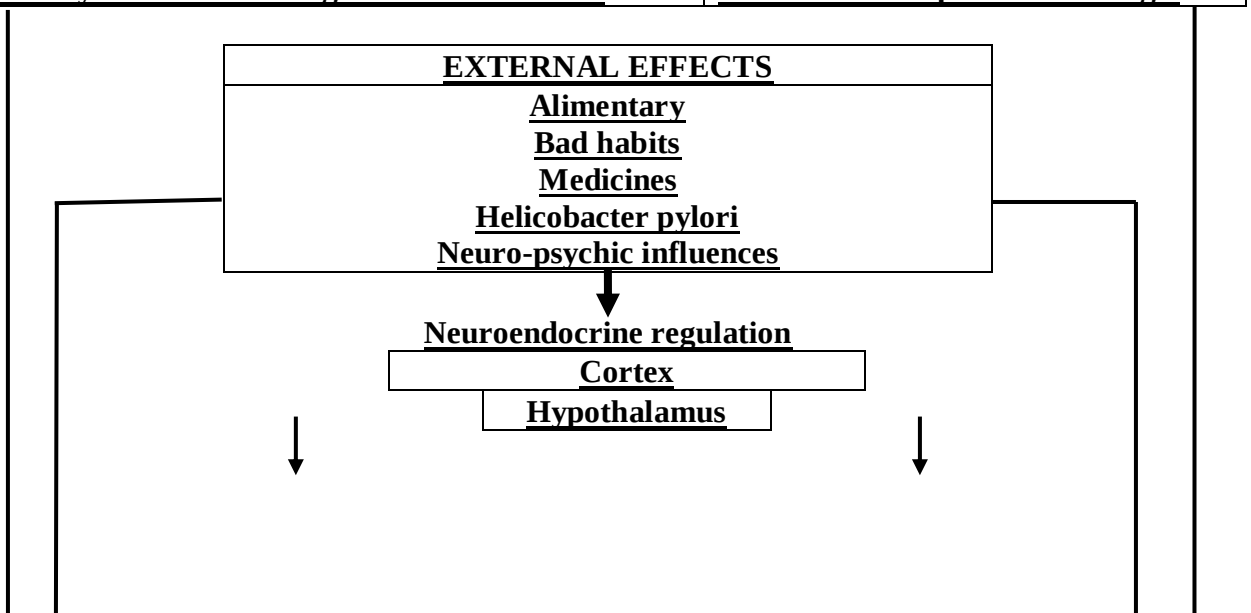
Report of student curators in the ward: when reporting the patient, students should pay special attention to the following manifestations of peptic ulcer.

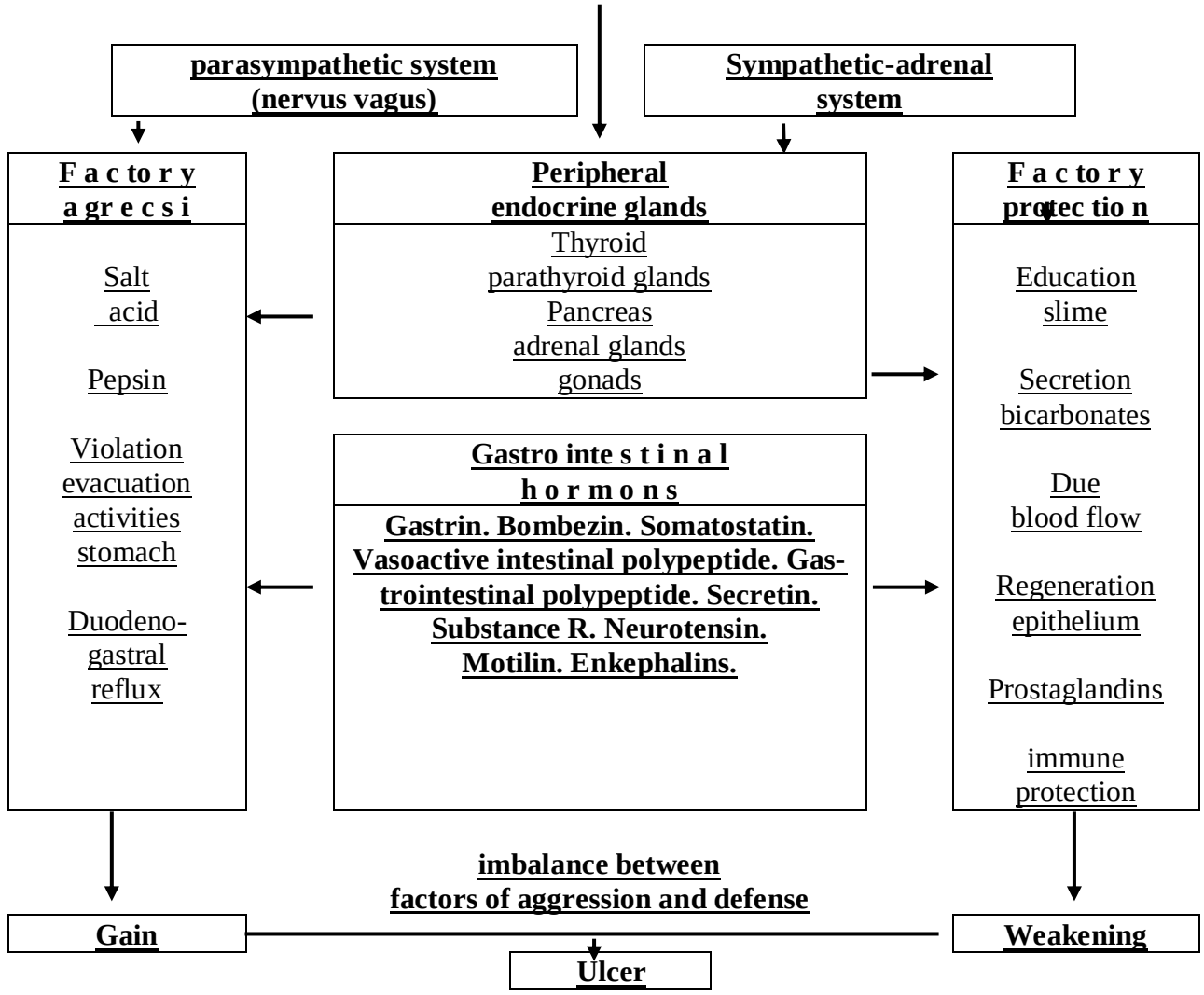
The main reasons causing hyperproduction of hydrochloric acid and pepsin are:

- increase in the number of parietal and chief cells;
- increased tone of the vagus nerve, which is a secretory nerve for the stomach;
- increase in secretion of gastrin and its stimulating effect on the gastric glands;
- increased sensitivity of secretory cells of the gastric glands to both increased and normal nervous and humoral stimulation.

Etiology and pathogenesis of peptic ulcer

GENETIC FACTORS	
Increase in the mass of parietal cells	**Blood type 0 (I)**
Increased release of gastrin	**Rh positive**
response to food	**"Status of non-secretor"**
An increase in the level of pepsinogen I in	**Fucomucoprotein deficiency**
blood serum	**The presence of HLA antigens B5,**
Trypsin inhibitor deficiency	**B15, B35**
Motility disorders of the gastroduodenal zone	**Violation of the production of lgA**





Complaints. With ulcers of the pyloric canal or pylorus, rhythmic pain occurs: late, "hungry" and nocturnal with irradiation to the back or to the upper lumbar region. The pain is often accompanied by nausea and vomiting. Along with this, an exacerbation of peptic ulcer is often accompanied by weight loss, heartburn, belching (sometimes a rotten egg), a feeling of fullness and rapid saturation with a relatively small amount of food.

With ulcers of the upper stomach, the pain is early, localized behind the xiphoid process, such as angina pectoris, occasionally radiating to the back and lumbar region.

The appearance of pain in peptic ulcer is due to:

- irritation with hydrochloric acid of sympathetic nerve endings in the bottom of the ulcer;
- motor disorders of the stomach and duodenum (pyloraspasm and duodenospasm are accompanied by increased pressure in the stomach and increased contraction of its muscles);
- vasospasm around the ulcer and the development of mucosal ischemia;
- decrease in the threshold of pain sensitivity in case of inflammation of the mucous membrane.

Of the dyspeptic manifestations, heartburn, nausea, vomiting, salivation, and sometimes bitterness in the mouth are observed. Heartburn is one of the most common and characteristic symptoms of peptic ulcer disease. It is caused by gastroesophageal reflux and irritation of the esophageal mucosa by gastric contents rich in hydrochloric acid and pepsin.

Belching is a fairly common symptom of peptic ulcer disease. The most typical eructation is sour, more often it happens with mediogastric than with duodenal ulcer.

The appearance of belching is due to both insufficiency of the cardia and antiperistaltic contractions of the stomach. It should be remembered that belching is also extremely characteristic of diaphragmatic hernia.

Vomiting and nausea are also characteristic symptoms of exacerbation of peptic ulcer. Vomiting is associated with increased vagal tone, increased gastric motility, and gastric hypersecretion. Vomiting occurs at the "height" of pain, vomit contains acidic gastric contents. After vomiting, the patient feels better, the pain is significantly weakened or even disappears. Repeatedly repeated vomiting is characteristic of pyloric stenosis or severe pylorospasm. Patients often induce vomiting themselves to alleviate their condition.

Nausea is characteristic of mediogastric ulcers, and is also often observed with postbulbar ulcers. At the same time, nausea, as E.S. Ryss (1995), is completely "uncharacteristic of duodenal ulcer and rather even contradicts such a possibility."

Appetite in peptic ulcer is usually preserved or even increased. Decreased appetite in an uncomplicated form of the disease occurs, as a rule, only with severe pain. More often than a decrease in appetite during an exacerbation of peptic ulcer, sitophobia is observed, i.e. fear of eating due to the possibility of pain or increased pain. Decreased appetite and sitophobia can lead to significant weight loss of the patient.

Constipation occurs in almost half of patients with peptic ulcer. They usually intensify during periods of exacerbation of the disease and are sometimes so persistent that they disturb the patient even more than the pain itself. Constipation in peptic ulcer disease is due to a number of reasons: reflex dyskinesia with spastic contractions of the intestine of vagal origin, a sparing diet, poor coarse fiber that stimulates the intestines, limited physical activity, as well as the intake of certain drugs (calcium carbonate, aluminum hydroxide, etc.).

Anamnesis. Pay attention to the age and gender of the patient, the use of rough and spicy food, the presence of psycho-emotional stress, concomitant diseases, bad habits (smoking, drinking alcohol), taking medications that have an ulcerogenic effect (NSAIDs, glucocorticoids, reserpine, etc.), hereditary predispositions. Prescription and course of the disease (persistent relapsing with seasonal exacerbations), used medications and non-pharmacological agents and the effect of their use.

objective status. The constitution of the patient and the degree of expression of the subcutaneous fat layer, the color of the skin. When examining a patient, late noise and splashing, local pain in the pyloroduodenal zone with deep palpation, combined with moderate resistance of the muscles of the anterior abdominal wall, can be detected. There may also be local percussion tenderness in the same area (positive Mendel sign).

Additional research. A clinical blood test with an uncomplicated course most often remains unchanged. Sometimes there is a slight increase in hemoglobin and red blood cells, but anemia may also be detected, indicating overt or hidden bleeding. Leukocytosis and accelerated ESR occur in complicated forms of peptic ulcer (with ulcer penetration, severe perivisceritis). Fecal occult blood test - negative Gregerson test. The study of the acid-forming function of the stomach is carried out using fractional gastric sounding or pH-metry (in recent years - using daily monitoring of intragastric pH). With ulcers of the duodenum and pyloric canal, increased rates of acid production are usually noted, with ulcers of the body of the stomach and subcardiac department - normal or reduced. Detection and confirmation of histamine-resistant achlorhydria almost always excludes the diagnosis of duodenal ulcer and casts doubt on the benign nature of the gastric ulcer. An X-ray examination reveals a direct sign of peptic ulcer - a “niche” on the contour or on the relief of the mucous membrane and indirect signs of the disease (local circular spasm of muscle fibers on the opposite wall of the stomach in relation to the ulcer in the form of a “pointing finger”, convergence of the folds of the mucous membrane to " niche”, cicatricial and ulcerative deformity of the stomach and duodenal bulb, hypersecretion on an empty stomach, disorders of gastroduodenal motility). When the ulcer is localized in the stomach, a biopsy is performed, followed by a histological examination of the material obtained. Investigation of the presence of HP in the gastric mucosa by urease, morphological or breath test.

Diagnosis of Helicobacter pylori infection. Diagnosis of Hp infection should be carried out by methods that directly detect the bacterium or its metabolic products in the patient's body. The following diagnostic methods satisfy these requirements:

1. bacteriological: sowing a biopsy of the gastric mucosa on a differential diagnostic medium;
2. morphological: - "gold standard" for Hp diagnostics: staining of bacteria in histological preparations of the gastric mucosa according to Giemsa, toluidine blue, Vartin-Starry, Gent;
3. respiratory: determination of 14C or 13C isotopes in the air exhaled by the patient; they are released as a result of the splitting of labeled urea in the stomach of a patient under the action of urease of the bacterium Hp;
4. urease: determination of urease activity in a biopsy of the gastric mucosa by placing it in a liquid or gel-like medium containing a substrate, a buffer and an indicator.

Subject to all the rules for the implementation of the methods and proper sterilization of endoscopic equipment, the primary diagnosis of Hp infection is sufficient to start anti-Helicobacter therapy when a bacterium is detected by one of the methods described.

Preliminary diagnosis: based on the leading complaints, anamnesis and clinical manifestations, as well as indicators of additional studies, a preliminary diagnosis is made.

differential diagnosis. Peptic ulcer must be differentiated from symptomatic gastric and duodenal ulcers, the pathogenesis of which is associated with certain underlying diseases or specific etiological factors - stress, drug, endocrine ulcers, as well as gastric and duodenal ulcers that develop in certain diseases of the internal organs (chronic pancreatitis, chronic nonspecific lung diseases, widespread atherosclerosis, Crohn's disease). Symptomatic gastroduodenal ulcers often develop acutely, sometimes manifesting as sudden gastrointestinal bleeding or perforation of ulcers, occur with atypical manifestations (blurred picture of exacerbation, lack of seasonality and periodicity).

If ulcerative lesions are found in the stomach, it is necessary to carry out differential diagnosis between benign ulcers, malignancy of the ulcer and the primary ulcerative form of gastric cancer (very large ulcers, localization of the ulcer on the greater curvature of the stomach, the presence of an increase in ESR and histamine-resistant achlorhydria). X-ray and endoscopically reveal the irregular shape of the ulcer, its uneven and bumpy edges, the rigidity of the stomach wall at the site of ulceration. The final conclusion about the nature of the ulcerative lesion is made after a histological examination of ulcer biopsy specimens.

Clinical diagnosis: according to the accepted classification, indicating the localization of the ulcer, the phase and nature of the course, disorders of the secretory and motor-evacuation functions of the stomach, complications.

Conducting classes in a thematic classroom. Analysis of the features of etiology, pathogenesis, clinic and treatment of a particular patient. Indicate the main methods of drug and non-drug effects, the main groups of antiulcer drugs and their mechanisms of action, the main indications and contraindications for use.

The final part of the lesson: control of acquired knowledge - solving situational problems without possible options for correct answers.

Summary. So, today we talked about one of the most important problems of internal medicine - peptic ulcer, manifested by the formation of gastric and duodenal ulcers due to an imbalance between the factors of aggression of gastric juice and the factors of protection of the mucous membrane of the stomach and duodenum towards the predominance of factors of aggression. The prognosis of peptic ulcer is largely determined by early diagnosis and timely treatment, which requires certain knowledge and perseverance.