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професор______________________
(Л.В.Журавльова)

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KHARKOV NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF INTERNAL MEDICINE N3

METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS

“Non-ulcer dyspepsia. Chronic gastritis.”

Kharkiv 2014

Content module №2 «Bases of diagnostics, treatment and preventive maintenance of the basic illnesses organs of digestive truct»

Practical class № 4. «Gastric dyspepsia and chronic gastritis»

Urgency of gastric (non-ulcer, functional) dyspepsia.

Non-ulcer dyspepsia or functional dyspepsia (FD) is most common in people to 25 years old and younger, but it can be common in older persons. Women suffer from FD in 1,5-2 times more than men. Prevalence is from 1,5 % to 58,8 % from number of all gastrointestinal disorders. Special symptoms (aerophagia, neurogenic symptoms, vomiting) meet rather seldom. They more characteristically for women with hysterical type of mentality.

The educational purposes:

- to teach students to distinguish the basic symptoms and syndromes of FD ;
- to acquaint students with the methods of physical examination of FD;
- to acquaint students with the methods of research which are applied to the diagnostics of FD; with indications and contra-indications they have; with the techniques of their performance; with the diagnostic value of each of them;
- to teach students to interpret the results of the lead researches independently;
- to teach students to distinguish and diagnose the complications of FD;
- to teach students to appoint the treatment for FD.

What should the student know?

- the frequency of FD occurrence;
- the etiological factors of FD;
- the pathogenesis of FD;
- the common clinical syndromes of FD;
- the general and disturbing symptoms of FD;
- the physical symptoms of FD;
- the methods of physical examination of patients with FD;
- the diagnostic of FD;
- diagnostical opportunities of esophagogastroduodenoscopy at FD, indications and contra-indications;
- the morphological researches of stomach mucous membrane at FD;
- the techniques of carrying out intragastric pH-metry, clinical estimation of the results;
- the methods of H.Pylory diagnostics;
- the radiological methods of FD diagnostics;
- complications with FD;
- treatment of FD (change of the way of life, balanced diet, medication).

What should the student be able to do?

- to define the main clinical and physical syndromes of FD;
- to interpret the results of biochemical and enzymoimmune researches;
- to interpret the data of esophagogastroduodenoscopy;
- to interpret the data of intragastric pH-metry;
- to interpret the data of radiological methods of diagnostics of FD;

— to institute the therapy for the patients with FD.

The list of practical skills which student should acquire

- inspection of the belly;
- superficial palpation of the belly;
- deep methodical sliding palpation of the abdominal cavity by Obraztsov-Strazhesco;
- the symptoms of irritated peritoneum;
- the reviev of skin and mucous membranes;

Definition

FD- it’s a complex of symptoms, which includes a painful syndrome, the feeling of overflow in the upper part of the abdomen after meals, which are usually accompanied by other dyspeptic symptoms (nausea, vomiting, heartburn, eructation) at absence of morphological and metabolic changes. The diagnosis can be established at presence of the specified symptoms during 12 months, the general duration of it is not less, than 12 weeks (3month).

There are the following causes of FD:
1. The infringement of gastroduodenal a motility:
   - weakening of motility of antral of a stomach with the subsequent delay of evacuation from the stomach (gastroparesis);
   - infringement of antroduodenal coordination;
   - disorders of peristaltic rhythm of the stomach (tachygastria and bradygastria);
   - infringement of stomach accommodation (ability of proximal stomach to relax after meals).
2. Increase of sensitivity receptors of the stomach walls to stretching (visceral hypersensitivity).
3. Infringement neuro-endokrine regulation - hormonally-active polipeptides (substance P, cholecystokinin, serotonin, prostaglandins etc.) affect on cellular receptors and symptoms of pain, dyspeptic disoders and mental maladjustment.
4. Genetic factors and influence of the environment can lead to infringement of psychosocial status and in this connection can cause the functional gastrointestinal disoders.
5. Connection with infection by H. Pylory (the role is not proved finally).

Classification of FD.

Types of FD:

Ulcer-like dyspepsia - in clinical picture it is the pain in epigastrium, which arise on an empty stomach and at night prevail and stopped after eating and using antacids;

Dyskinetic (dysmotility) dyspepsia: the common complaints are fast saturation and sensation of overflow in epigastrium after eating, nausea, sensation of discomfort and a swelling in epigastrium which amplify after meals;

Nonspecific dyspepsia**-** there are ulcer-like symptoms and dyskinetic variants of dyspepsia in clinic.

Clinic of FD

FD symptoms are varied, not specific and, therefore, can not serve as a reliable diagnostic criterion. Most of the functional nature of these symptoms seen a lot of complaints, often with emotional overtones.

The clinic includes a common neurological disorders: insomnia, headache, irritability, bad moods, and special disorders which are dependent on the version of dyspepsia.

Ulcer-like variant: periodic pain in epigastrium with average intensity, as a rule, without irradiation, which arises at empty stomach (hungry pain), or at night (night pain), and pass after eating and-or reception of antacids.

Dysmotility variant: early satiety, weight, overflow, swelling in epigastrium; discomfort after eating, nausea, frequent vomiting, deterioration of appetite.

Nonspecific variant: there are various attributes of the mentioned variants. One patient can have associations of different FD variants.

According to the Roman diagnostic criteria II for FD the following of three attribute are described:

1) constant or recurrent dyspepsia (pain or discomfort which is localized in epigastrium on an average line), its duration is no less than 12 weeks for last 12 months (there can be a "light" periods between aggravations);
2) absence of confirmed proofs of the organic disease by the anamnesis, endoscopic research of the upper parts of the gastrointestinal tract, ultrasound of abdominal cavity;
3) absence of proofs that dyspepsia is relief after act of defecation or connected with change of frequency or the form of excrements.

Complains have the crucial importance at diagnostics of special forms:

- at aerophagia - a loud eructation air, vomiting which easily arises without a previous nausea, and and also often the symptoms of neurovegetative instability;
- at frequent vomiting: the vomiting can be caused by view on meal, its smell, even while thinking about meal; and it is amplifies, as a rule, at psychological tension.

Diagnostics of FD

Research of secretory and motor-evacuatory functions of stomach does not have a diagnostic value. Great value have radiological, manometrical and electrogastroscopic researches.

Radiological research - infringement of impellent function can be hypermotor (a hypertone of stomach, segmenting peristalsis, pylorospasm) or hypormotor type (hypotone of stomach, gastroptosis, flabby peristalsis, slowed down evacuation). This research allows to establish the presence of reflux of stomach contents in esophagus and duodenum.

Manometries - it is mainly used in scientific purposes.

Electrogastroscopic method - consists of selective record of biopotentials of stomach (it is registers by electrogastrography), of a surface of a forward stomach wall. But this method is low-informative and results are astable also insufficiently specific.

There were developed a new neurophysiological methods which allow to register the recognition of painful sensations in central nervous system:

-electroencephalography at stimulation GIT;
-magnitoencrphalography;
-positron an imissionny tomography;
-functional magnetic-resonance research

Diagnostic actions

1. Laboratory researches

Obligatory: general analysis of blood and urine, glucose of blood whey, coprogramm, the analysis of an excrement on the latent blood, and at presence of indications - coagulogramm, iron of blood whey.

2. Instrumental and other kinds of diagnostics

Obligatory: radiopaque scopy of a stomach and duodenum, videoendoscopy of a stomach and duodenum, intragastral pH-metry of a stomach, pH-metry of esophagus, ultrasound, electrocardiogram.

At presence of indications - chromoendoscopy of stomach, biopsy of stomach mucous membrane, monitoring, that lasts many hours, of pH of esophagus, definition Helicobacter pylori, research of stomach with radioactive isotopes.

3. Consultations by specialists:

Obligatory: neuropathologist, psychotherapist, at presence of indications - the psychiatrist.

Differential diagnosis of FD:
- stomach ulcer;
- stomach cancer;
- chronic gastritis;
- chronic cholecystitis;
- chronic pancreatitis;

The final diagnosis is established by exception of other diseases.

Treatment of FD.

The common principles of treatment of FD:

- Individual approach to the patient in view of a kind of dyspepsia;
- Differentiated assignment of antacids, proton pomp-blockers, H2-blockers of histamine receptors, selective M1-receptors, bismuth preparations, antibiotics, metranidazol, etc.
- The international working committee concerning functional gastroduodenal diseases of organs of digestive truct (1994) also gives an additional recommendations, concerning the treatment of patients with FD: to spend treatment placebo as the success placebo is observed in 20-60 % of cases; symptoms, which arise after meal (overflow and fast saturation), it is possible to reduce a pain if to exclude from a diet spicy and fat food.

Schemes of pharmacotherapy:

1. Omeprazol (omez) or lansoprazol (lanza, lanzap) kaps. or table once a day; pantoprazol (kontrolok) or rabeprazol (pariet) or ezomeprazol (neksium) or famotidin (kvamatel) on 1 tab. 2 times a day; also appoint {nominate} diosmektit (white clay) on 1 powder 3 times a day; also appoint amitriptyline (amizol) on 25 mg 2 times a day, or fluvoksamin (fevarin) 50-100 mg lumpsum in the evening.
2. Metoklopramid (cerukal) or domperidon (motilium) on 1 tab. 3 times a day; antacids which is soaked up (renni) - on 1 tab. 3-4 times a day; simethicone (espumizan) on 40-80 mg 3-4 times a day; ondasetron (osetron) on 1 table.
3. Antikhelikobaktery therapy for 1 week; antacids, which contain of aluminium (maaloks, almagel, osfalyugel) on 3-4 times a day in 40 minutes after meal.

The criterion of efficiency of treatment of disease is if the symptoms are absent or their intensity decreased.

Chronic gastritis (CG)

The educational purposes:

- to teach students to distinguish the basic symptoms and syndromes of CG;
- to acquaint students with the methods of physical examination of CG;
- to acquaint students with the methods of research which are applied to the diagnostics of CG; with indications and contra-indications they have; with the techniques of their performance; with the diagnostic value of each of them;
- to teach students to interpret the results of the lead researches independently;
- to teach students to distinguish and diagnose the complications of CG;
- to teach students to appoint the treatment for CG.

What should the student know?

- the frequency of CG occurrence;
- the etiological factors of CG;
- the pathogenesis of CG;
- the common clinical syndromes of CG;
- the general and disturbing symptoms of CG;
- the physical symptoms of CG;
- the methods of physical examination of patients with CG;
- the diagnostic of CG;
- diagnostical opportunities of esophagogastroduodenoscopy at CG, indications and contra-indications;
- the morphological researches of stomach mucous membrane at CG;
- the techniques of carrying out intragastric pH-metry, clinical estimation of the results;
- the methods of H.Pylory diagnostics;
- the radiological methods of CG diagnostics;
- complications with CG;
- treatment of CG (change of the way of life, balanced diet, medication).

What should the student be able to do?

- to define the main clinical and physical syndromes of CG;
- to interpret the results of biochemical and enzymoimmune researches;
- to interpret the data of esophagogastroduodenoscopy;
- to interpret the data of intragastric pH-metry;
- to interpret the data of radiological methods of diagnostics of CG;
- to institute the therapy for the patients with CG.

Definition

CG– it is disease with a chronic relapsing course, which is based on inflammatory and dystrophic, degenerative lesions of the gastric mucosa, accompanied by disorders of its secretory, motor-evacuation and incretory function.

Considering the etiology and pathogenesis of CG to dwell on the role of reactivity, exogenous and endogenous factors that contribute to disease development. In clinical practice, often there are three types of CG (surface - primarily involving the antrum, often with H. pylori - assotiated (gastritis type B), autoimmune fundal gastritis (gastritis type A), the formation of which participate autoimmune mechanisms, chemical, reflux gastritis (gastritis type C), which is characterized by focal lesions of fundus of the stomach due to the cytotoxic effect on the mucosa content of duodenal ulcer by duodenogastric reflux. Then it must be emphasized that there are forms of CG as radiation, lymphocytic, granulomatous, eosinophilic (allergic), other infectious gastritis (non-h.pilori-associated) - the latter are rare. Particular attention should be paid to Menetriye disease - hypertrophic gastropathy. should also pay attention to the morphological changes in CG, such as inflammation, atrophy, disorders of cell renewal, including including metaplasia and dysplasia.

Clinical syndromes: pain, dyspeptic syndrome (gastric and intestinal dyspepsia), malabsorption, atsidizm, dumping syndrome, autonomic dysfunction, cardiovascular disorders, asthenic-neurotic.

Diagnostic: researches of the secretory function of the stomach (gastric sensing and intragastric pH-metry) pepsin forming features motor-evacuation, diagnose of H. Pylori infections, radiological and endoscopic diagnosis, morphological research.

Differential diagnosis of CG: with stomach cancer, peptic ulcer, chronic cholecystitis and pancreatitis, chronic enteritis and colitis, GERD. Staying on the leading symptoms of the disease, the student lists the disease, in which symptoms may occur east and justifies why should abandon the idea of presence in this patient of each of these diseases.

Peculiarities of CG: disease course exists the phases of exacerbation and remission, sluggish course, course characteristics (stage of compensation, subcompensation and decompensation). Special forms of CG (hemorrhagic, polypose, antral gastritis, disease of Menetriye).

The complications of CG: bleeding, ferrum-deficiency anemia, B12 - folicdeficitic anemia, gastrogenic colitis, hipopolyvitaminosis, gastric cancer.

The algorithm of CG treatment:

1. Normalization of lifestyle: eliminate stress, if necessary - using sedative drugs.
2. Diet. The principle of mechanical, chemical and thermal sparing. Food must be fractional, 5-6 times a day. Avoid foods that have a stimulating effect on the stomach, stop taking drugs, smoking.
3. Pharmacotherapy - depends on the type of CG.

CG Type B - according to the Maastricht III Consensus (Florence, 2005) - should be performed eradication of H. pylori.

Schemes of antihelicobacter therapy (first line)

1-component	2-component	3-component
PPI: omeprazole (OMEP) 20 mg 2 times a day	Clarithromycin (Lekoklar) 500 mg 2 times a day	Amoxicillin (Ospamoks) 1000 mg 2 times daily or metronidazole 500 mg 2 times a day

Schemes of quadruple antihelicobacter therapy (second line)

1-component	2-component	3-component	4-component
PPI: omeprazole (OMEP) 20 mg 2 times a day	Bismuth subsalicilatis / subcitrate 120 mg 4 times a day	Metronidazole 500 mg 3 times a day	Tetracycline 500 mg 4 times a day

CG type A - no special treatment. When concomitant exocrine pancreatic insufficiency (steatorrhea) - pancreatic enzymes. If megaloblastic anemia - i/m vitamins B12 - 1000 mg during 6 days later for a month 1 time a week, then - continued throughout the life of 1 every 2 months.

CG Type C - normalization of gastrointestinal tract motility and connection of bile acids. Are effective prokinetic (motilium), cholestyramine (6-10 g per day) in combination with antacids

(Maalox, fosfalugel). When bile reflux gastritis - ursodeoxycholic acid 250-500 mg per night for 6-8 weeks.

At NSAID-induced gastritis - cancel NSAID, if you can not - use of selective COX-2 inhibitors. The preparation of choice is mezoprostole (200 mg 3 times a day and at night).

The control of initial level of knowledge

1. The patient complains of heartburn, eructation, heavy feeling in epigastrium which appear after emotional overstrain. What could cause such clinical picture?

A. Chronic gastritis
B. Functional dyspepsia
C. Stomach ulcer
D. Duodenal ulcer
E. GERD

2. The 32 year old man, complains of weakness, heartbeat after meal. Objectively: a skin and mucosal of usual color. pulse rate is 78/min., blood pressure is 120/70 mm Hg. Tones of heart are rhythmic, sonorous. The liver and spleen are not enlarged. Than the given complaints are caused?

A. Chronic cholecystitis
B. Chronic gastritis
C. FD
D. Gastric ulcer
E. Chronic pancreatitis

3. The woman, 35 years, complains of heartburn and pain while the swallowing. Which of the researches results are the most informative?

A. Colonoskopy
B. pH-metry
C. Ultrasound research
D. X-ray of stomach
E. Esophagogastroduodenoscopy

4. The 24 year old patient complains of pain in the chest during sleep which is occasionally accompanied by heartburn. Abdomen is soft, painless. The liver and a spleen are not enlarged. Which of the researches is the most informative?

A. ECG
B. pH-metry
C. Esophagogastroduodenoscopy
D. X-ray of stomach
E. Ultrasound research

5. The 29 year old patient complains of weakness, air eructation. Which previous diagnosis is the most probable?

A. GERD
B. Type A chronic gastritis
C. Type B chronic gastritis
D. FD

E. Stomach ulcer

6. The 20 year old employee has pains in epigastrium which are accompanied by heartburn. Work is connected with nervous overstrain. Which of the listed methods the most informative for diagnostics:
A. Factious research of gastric juice
B. X-ray of stomach
C. Fibroesophagogastroduodenoscopy
D. pH-metry
E. Duodenal sounding

7. The 35 year old patient complains of pains in epigastrium after eating, heartburn and eructation. A pathology was not revealed during fibroesophagogastroduodenoscopy. What is the most credible diagnosis?
A. FD
B. Chronic gastritis
C. Stomach ulcer
D. Chronic duodenitis
E. GERD

8. The 22 year old patient complains of weakness, sensation of lump in a throat, pain in epigastrium and hiccups. Your preliminary diagnosis?
A. GERD
B. Esophageal reflux
C. FD
D. Chronic esophagitis
E. Stomach cancer

9. The 19 year old patient with the increased weight complains of pain in epigastrium and heartburn at night. Which of research is the most expedient?
A. ECG
B. Factious research of gastric juice
C. Ultrasound research
D. X-ray of epy stomach
E. Esophagogastroduodenoscopy

10. The 31 year old patient complains of intensive pain which amplifies after emotional overstrain, does not pass after meal. Think, if it is possible, what disease it can be first of all?
A. GERD
B. Stomach ulcer
C. Type A chronic gastritis
D. FD
E. Type B chronic gastritis

Functional dyspepsia (an initial level of knowledge)
1. B
2. C
3. E

4. C
5. D
6. D
7. A
8. C
9. E
10. D

The control of final level of knowledge

1. The patient complains of heartburn, food eructation, periodic pain under xiphoid with increasing at swallowing. A pathology was not revealed during fibroesophagogastroduodenoscopy. What is the most probable reason of this complains?
A. FD
B. Type A chronic gastritis
C. Type B chronic gastritis
D. GERD
E. All set forth above

2. With development of what a syndrome of dyspepsia is connected at FD:
A. Disorders of suction
B. Decline of hydrochloric acid contents
C. Decline of pepsin contents
D. Presence of antibodies to cells of the stomach
E. Disorders of gastroduodenal motility

3. Functional dyspepsia is:
A. Complex of symptoms which includes a painful syndrome at absence of morphological and metabolic changes.
B. Century complex of symptoms, which includes a painful syndrome, sensation of overflow in the upper part of abdomen after eating, which are usual accompanied by others dyspepsia symptoms (vomiting, heartburn, eructation) at absence of morphological and metabolic changes.
C. Complex of symptoms, which includes sensation of overflow in the upper part of the belly after meals, which are usual accompanied by others FD symptoms (nausea, vomiting, heartburn, eructation) at absence of morphological and metabolic changes.
D. Complex of symptoms, which includes dyspepsia symptoms (nausea, vomiting, heartburn, eructation) at absence of morphological and metabolic changes.
E. Complex of symptoms which includes a painful syndrome, sensation of overflow in the upper part of abdomen after meal which are usual accompanied by others dyspepsia symptoms (nausea, vomiting, heartburn, eructation).

4. A pathogenetic mechanisms of development of concern:
A. Duodenostasis
B. Disorders of gastroduodenal motility
C. Gastrostasis
D. Increase of acidity of gastric contents
E. Decline of acidity of gastric contents

5. Name the basic clinical types of FD

A. Ulcer-like, dysmotility variant, nonspecific FD
B. Non-erosive and erosive FD
C. Esophageal and out-esophageal FD
D. Stomach and intestinal
E. All set forth above

6. Prominent feature of clinic FD is:

A. Emotions painting of complaints
B. Strengthening of pain during eating
C. Long and burning character of pain
D. Distribution of pain on a course of esophagus
E. Pain when stomach is empty

7. The basic method of diagnostics FD it is:

A. Psychological tests
B. Research of stomach secretory functions
C. Esophagogastroduodenoscopy
D. pH-monitoring
E. X-ray

8. FD is characterized by:

A. Gullet ulcer
B. Stomach ulcer
C. Anaemia
D. Absence of morphological changes of stomach
E. Metaplazija epithelium of cardium a department of a stomach

9. Differential diagnosis should be spent with:

A. GERD
B. Stomach ulcer
C. Chronic gastritis
D. Stomach cancer
E. With all the listed diseases

10. For treatment of FD can be effective:

A. Platsebo
B. Blocators of H2 - receptors of histamine
C. Prokinetics
D. M - cholinolitics
E. All listed

FD (final level of knowledge)

1. A	6. A
2. E	7. C
3. B	8. D
4. B	9. E
5. A	10. A

Situational tasks

1. A patient of 37 years old complains of pain in epigastrium, more often during while sleeping, or after emotional overload, heartburn. These symptoms amplify after eating. Objectively: A belly is painless while palpation, the liver and spleen are not enlarged. What diagnosis is most probable?

A. Stomach cancer
B. Stomach ulcer
C. Chronic gastritis
D. Chronic cholecystitis
E. FD

2. The 21 year old pregnant patient (pregnancy of 30 weeks) complains of constant heartburn, eructation, sleeplessness, frequent migraines. Before pregnancy she was healthy. What is the most probable reason of given disorders?

A. By declining of anti-reflux barrier function
B. By the decline of hover of esophagus
C. FD
D. By stomach evacuation disorders
E. By inability of mucous membrane of esophagus to resist to action of stomach contained which is thrown out into esophagus

3. The patient, suffering from bronchial asthma, complains of attacks of asthma which arise at slopes of the trunk or in horizontal position, and feeling of fast saturation after meals, weights and swelling in epigastrium. These disorders have been regarded by him as attacks of bronchial asthma, but usual means of knocking over of attacks have not given results. Than is it possible to explain the given phenomenon?

A. Getting to means which are applied
B. By a necessity to increase a doze of means which were used as usual
C. Used by a presence of the incorporated pathology
D. By a necessity to change means for knocking over of attacks
E. By a necessity to add one more means

4. The patient complains of heartburn and eructation, itability, periodic pain in epigastrium of moderaty intensity without irradiation which disappears after meals. At esophagogastroduodenoscopy - without pathology. For what disease it is characterized?

A. Stomach ulcer
B. Chronic gastritis
C. Chronic pancreatitis
D. FD
E. Dysmotility of gall-bladder

5. The 22 year old patient, whom was established the diagnosis FD, an ulcer-like variant at inspection and treatment in gastroenterology department. What combination of groups of preparations is most effective for treatment?

A. Spasmolytics + Antacids
B. Analgetics + Antacids
C. Antibacterial preparations + Inhibitors proton pomp
D. Hepatoprotection preparations + blocators of H2- receptors of histamine
E. Inhibitors of proton pomp + diosmektit

6. The patient complains of pain which periodically arises in epigastrium during dreaming and heartburn after eating. Objectively: the patient has excessive weight of body. Disoder of which organ is the most possible?
A. Stomach
B. Gall-bladder
C. Pancreas
D. Intestine
E. Esophagus

7. The woman was delivered in clinic with complaints of pain under shoot of the constrained intensity which arises during sleep, accompanied by nausea and sometimes vomiting, disappears after reception antacids. From anamnesis: complaints of heartburn during last year. The stomach takes participation in the certificate of breath, is moderate-painful in epigastrium. There was not revealed any organic pathology during examination. What is the most probable reason of abdominal pain?
A. Heart attack
B. Acute gastritis
C. Acute pancreatitis
D. Bilious colic
E. FD

8. The 48 year old patient complains of periodic pain in epigastrium, without irradiation, heartburn, which amplify after meals, migraine and sleeplessness. After reception of 20 mgs of rabeprazole during first two days these symptoms disappeared. For what disease this clinical picture is typical?
A. Type A chronic gastritis
B. Duodenal ulcer
C. FD
D. Chronic pancreatitis
E. Chronic hepatitis

9. The man complains of sleeplessness caused by night pain in epigastrium, sensation of fast saturation after meals, overflow and swelling of the stomach. It was established the diagnosis - gastric dyspepsia. For which variant of disease this clinical picture is characterized?
A. Ulcer dyspepsia
B. Dismotility variant
C. Nonspecific variant
D. All listed

10. The patient was revealed a plural erosion of esophagus at esophagogastroduodenoscopy. With what disease their occurrence is connected?
A. GERD, non-erosive form

B. GERD, erosive form
C. Type A chronic gastritis
D. FD
E. Stomach ulcer

Right answers

1. E	5. E	9. C
2. C	6. E	10. B
3. C	7. E	
4. D	8. C	

Test questions

1. Definition of FD.
2. The basic clinical syndromes of FD.
3. The characteristics of the painful syndrome of FD.
4. The characteristics of dyspeptic syndrome of FD.
5. Classification of FD
6. Name the methods of FD diagnostics.
7. Principles of FD treatment.
8. The way of life and diet therapy for the patients with FD.
9. Medication therapy with FD
10. Prevention of FD

Practical tasks

1. Lead a questioning of patient with FD.
2. Interpret received laboratory tests.
3. Give the interpretation of the received results of instrumental methods of investigation.
4. To lead a differential diagnosis of FD
5. To name the complications of FD
6. Write down the recipes concerning the symptomatic therapy of FD.