

МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

МЕТОДИЧНІ РЕКОМЕНДАЦІЇ
ДЛЯ СТУДЕНТІВ з англomовною формою навчання

<i>Навчальна дисципліна</i>	Основи внутрішньої медицини
<i>Модуль №</i>	1
<i>Змістовний модуль №2</i>	Основи діагностики, лікування та профілактики основних хвороб органів травлення
<i>Тема заняття</i>	Хронічні захворювання товстого кишківника
<i>Курс</i>	4
<i>Факультет</i>	Медичний

KHARKOV NATIONAL MEDICAL UNIVERSITY
DEPARTMENT OF INTERNAL MEDICINE N3

METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS

"Chronic diseases of large intestine: ulcerative colitis, Crohn's disease, irritable bowel syndrome"

Kharkiv 2013

Module №2 " Fundamentals of diagnostics, treatment and prevention of major diseases of the digestive system"

Topic № 8. "Chronic diseases of a large intestine (CDLI)"

Topicality:

The inflammatory bowel disease (IBD) – a term that defines a group of chronic diseases, which are characterized by the destructive nonspecific immune inflammation of the wall of the gut. Their etiology is unknown. Inflammatory diseases of intestines include ulcerative colitis (UC) and the Crohn's disease (CD).

The prevalence of UC varies from 28 to 117, CD - from 34 to 146 patients per 100000 of population and depends on ethnicity and a geographical zone. In southern countries the morbidity is low. European population shows higher prevalence of IBD than African one. The prevalence of UC in the big cities is 1,5-4 times higher than in rural areas. The age peak of UC morbidity is 20-40 years, as regards CD – the peak is between 20-29 years. The isolated lesion of large intestine in case of UC is more frequently observed in patients older than 70 years, the combined lesion of the large and small intestine or the isolated lesion of the small intestine are more frequently found in the young persons. Persons of both sexes get sick with the identical frequency, but there is a tendency to the relatively more frequent CD morbidity in women, and more frequent UC in men. For UC and CD the genetic predisposition is typical - about 10% of patients with UC and 20% of patients with CD have relatives of the first degree, which are sick with the same illnesses.

Irritable Bowel Syndrome (IBS) - one of the most common diseases in gastroenterological practice. IBS possesses 2nd place after colds among the causes for inability to work in the U.S. IBS significantly affects the quality of life of patients and forces them to go to the doctor at an average of 3 times a year, 19% of them - more than 5 times a year.

The prevalence of IBS varies from 14-22 to 30-48%, the average is 20%. The variability in evaluation of IBS incidence is caused by different number of symptoms that are taken into consideration at making diagnosis. Another important fact is that about 2/3 of the patients don't go to the doctor and treat themselves independently. IBS occurs in women 2-4 times more often than in men. Typically disease occurs at a young age - 30-40 years. Among men older than 50 years IBS occurs as often as in women. When symptoms of IBS occur in patients older than 60 years, the diagnosis is doubtful and other diseases of intestines should be considered .

The educational purposes:

- To teach students to recognize the basic symptoms and syndromes of IBS and IBD;
- To acquaint students with physical methods of examination of IBS and IBD;
- To acquaint students with methods of research which are applied to diagnosis of IBD and IBS taking into consideration indications and contraindications for their performance; techniques of their application; the diagnostic value of each of them;
- To teach students to interpret results of the main research methods independently;
- To teach students to recognize and diagnose complications of IBS and IBD;
- To teach students to prescribe treatment at of IBS and IBD

What should the student know?

- Incidence of IBS and IBD;
- Etiological factors of IBS and IBD;
- Pathogenesis of IBS and IBD;
- The basic clinical syndromes of IBS and IBD;
- The general and alarm symptoms of IBS and IBD;

- Clinical signs of IBS and IBD;
- Diagnostics of IBS and IBD;
- Morphological studies of intestines in case of IBS and IBD;
- Instrumental methods of diagnostics of IBS and IBD;
- Differential diagnostics of IBS and IBD;
- Classification of IBS and IBD;
- Complications of IBS and IBD;
- Treatment of IBS and IBD (change of life style, a balanced diet, drug therapy).

What should the student be able to do?

- to define main clinical syndromes of IBS and IBD;
- to interpret the results of biochemical and immunoenzyme assays;
- to interpret the data of bowel biopsy;
- to interpret the data of instrumental methods of diagnostics;
- to assess the correspondence of specific patient to the criteria of successful therapy;
- to assess the differential diagnosis;
- to prescribe regimen for patients with IBS and IBD.

The list of practical skills which the student should possess:

- Examination of abdomen;
- Superficial palpation of abdomen;
- Deep methodical sliding palpation of abdomen,
- Examination of a skin and mucous membranes;
- Physical examination of liver.

The content of the topic:

Irritable bowel syndrome (IBS) - the disorder of the motor and secretory function of bowel, that predominantly involves large intestine, without structural changes in the organ.

Roman criteria of IBS:

The Rome criteria require the presence of abdominal pain or discomfort for at least 3 days/month in the last 3 months along with ≥ 2 of the following: (1) improvement with defecation, (2) onset (of each episode of discomfort) associated with a change in frequency of defecation, or (3) change in consistency of stool.

The following symptoms cumulatively confirm the diagnosis of IBS:

1. Pathological stool frequency (more than 3 times a day or less than 3 times a week)
2. Pathological stool form (lump / dense or liquid / watery)
3. Pathological passage of stool (straining, urgency, feeling of incomplete evacuation).
4. Mucus discharge
5. Bloating and a feeling of fullness.

Etiology and pathogenesis

The cause of IBS is unknown. No anatomic cause can be found on laboratory tests, x-rays, and biopsies. Emotional factors, diet, drugs, or hormones may precipitate or aggravate GI symptoms. Historically, the disorder was often considered as purely psychosomatic. Although psychosocial factors are involved, IBS is better understood as a combination of psychosocial and physiologic factors.

Psychosocial factors: Psychologic distress is common among patients with IBS, especially in those who seek medical care. Some patients have anxiety disorders, depression, or a somatization disorder. Sleep disturbances also coexist. However, stress and emotional conflict do not always coincide with symptom onset and recurrence. Some patients with IBS seem to have a learned aberrant illness behavior (ie, they express emotional conflict as a GI complaint, usually abdominal pain). The physician evaluating patients with IBS, particularly those with refractory symptoms, should investigate for unresolved psychologic issues, including the possibility of sexual or physical abuse. Psychosocial factors also affect the outcome in IBS.

Physiologic factors: A variety of physiologic factors seem to be involved in IBS symptoms. These factors include altered motility, visceral hyperalgesia, and various genetic and environmental factors.

Visceral hyperalgesia refers to hypersensitivity to normal amounts of intraluminal distention and heightened perception of pain in the presence of normal quantities of intestinal gas; it may result from remodeling of neural pathways in the brain-gut axis. Some patients (perhaps 1 in 7) have reported their IBS symptoms began after an episode of acute gastroenteritis (termed postinfectious IBS). A subset of patients with IBS has autonomic dysfunctions. However, many patients have no demonstrable physiologic abnormalities, and even in those that do, the abnormalities may not correlate with symptoms.

Constipation may be explained by slower colonic transit, and diarrhea may be explained by faster colonic transit. Some patients with constipation have fewer colonic high amplitude-propagated contractions, which propel colonic contents over several segments. Conversely, excess sigmoid motor activity may retard transit in functional constipation.

Postprandial abdominal discomfort may be attributed to an exaggerated gastro-colonic reflex (the colonic contractile response to a meal), the presence of colonic high amplitude-propagated contractions, increased intestinal sensitivity (visceral hyperalgesia), or a combination of these. Fat ingestion may exaggerate hypersensitivity.

CLASSIFICATION OF IBS

1. To 58. Irritable bowel syndrome
2. To 58.0. Irritable bowel syndrome with diarrhea
3. To 58.9. Irritable bowel syndrome without diarrhea
4. To 59.0. Irritable bowel syndrome with constipation

CLINICAL TYPES OF IBS:

With the prevalence of diarrhea: abdominal pain in conjunction with frequent bowel movements 3 or more times a day, evacuation of unformed or watery stools and / or urge to defecate. Small volume of stool, liquid or soft consistency of stool (may be heterogeneous when formed first portion changes to liquid next portion) mixed with mucus. Recurrent diarrhea doesn't cause malabsorption. Some weight loss may be due to peculiarities of neuropsychological status.

With the prevalence of constipation: Abdominal pain in combination with rare bowel movements (less than 3 times per week), with the evacuation of solid ("sheep" type), stool with mucus, with a sense of incomplete emptying after the act of defecation.

SYMPTOMS, THAT ALLOW TO EXCLUDE THE DIAGNOSIS OF IBS.

Complaints and anamnesis: weight loss, very severe abdominal pain or unusual abdominal distention, steatorrhea or noticeably foul-smelling stools, persistent vomiting, hematemesis,

symptoms that wake the patient from sleep (pain, the urge to defecate), and a steady progressive worsening of symptoms.

Objective data: fever or chills, hepato- or splenomegaly

Laboratory data: fresh blood in the stool, leukocytosis, anemia, increased ESR.

DIAGNOSIS

CBC, biochemical profile (including liver tests), ESR, stool examination for ova and parasites (in those with diarrhea predominance), thyroid-stimulating hormone and Ca for those with constipation, and flexible sigmoidoscopy or colonoscopy should be done. During flexible fiber-optic proctosigmoidoscopy, introduction of the instrument and air insufflation frequently trigger bowel spasm and pain. The mucosal and vascular patterns in IBS usually appear normal. Colonoscopy is preferred for patients > 50 with a change in bowel habits, particularly those with no previous IBS symptoms, to exclude colonic polyps and tumors. In patients with chronic diarrhea, particularly older women, mucosal biopsy can rule out possible microscopic colitis.

Additional studies (such as ultrasound, CT, barium enema x-ray, upper GI esophagogastroduodenoscopy, and small-bowel x-rays) should be undertaken only when there are other objective abnormalities. Fecal fat excretion should be measured when there is a concern about steatorrhea. Testing for celiac sprue and small-bowel x-rays are recommended when malabsorption is suspected. Testing for carbohydrate intolerance should be considered in appropriate circumstances.

Differential diagnosis:

1. Mild form of UC
2. Crohn's Disease
3. Bowel diverticulosis
4. Colorectal cancer
5. Intestinal polyposis
6. Tuberculosis of intestines
7. Parasitic infections and intestinal infections
8. Gynecological disorders (endometriosis)
9. Endocrine diseases (diabetic enteropathy, hyperthyroidism).

Drug therapy: Drug therapy is directed toward the dominant symptoms. Anticholinergic drugs (eg, hyoscyamine 0.125 mg po 30 to 60 min before meals) may be used for their antispasmodic effects.

Serotonin receptor modulation may be of benefit. Tegaserod, a 5HT₄ agonist, stimulates motility and alleviates constipation. In 2007, tegaserod was withdrawn from the market because, in clinical trials, it slightly increased the incidence of cardiovascular ischemic events (ie, MI, unstable angina pectoris, stroke) compared with placebo. Tegaserod has since been reintroduced under a restricted program. The chloride channel activator lubiprostone may help patients with constipation.

In patients with diarrhea, oral diphenoxylate 2.5 to 5 mg or loperamide 2 to 4 mg may be given before meals. The dose of loperamide should be titrated upward to reduce diarrhea while avoiding constipation. For many patients, tricyclic antidepressants (TCAs) help relieve symptoms of diarrhea, abdominal pain, and bloating. These drugs are thought to reduce pain by down-regulating the activity of spinal cord and cortical afferent pathways arriving from the intestine. Secondary amine TCAs (eg, nortriptyline, desipramine) are often better tolerated than parent tertiary amines (eg, amitriptyline, imipramine, doxepin) because of fewer anticholinergic, sedating antihistaminic, and α -adrenergic adverse effects. Treatment should begin with a very low dose of a TCA

(eg, desipramine 10 to 25 mg once/day at bedtime), increasing as necessary and tolerated up to about 100 to 150 mg once/day. SSRIs are also useful, particularly for patients with anxiety or an affective disorder, but may exacerbate diarrhea. 5HT₃ antagonists (eg, alosetron) may benefit female patients with severe diarrhea refractory to other drugs. Because alosetron is associated with ischemic colitis, its use is restricted.

Preliminary data suggest that certain probiotics (*Bifidobacterium infantis*) alleviate IBS symptoms, particularly bloating. The beneficial effects of probiotics are not generic to the entire species but specific to certain strains. Certain aromatic oils (carminatives) can relax smooth muscle and relieve pain caused by cramps in some patients. Peppermint oil is the most commonly used agent in this class.

Nonpharmacological therapy:

Diet: in general, a normal diet should be followed. Meals should not be overly large, and eating should be slow and paced. Patients with abdominal distention and increased flatulence may benefit from reducing or eliminating beans, cabbage, and other foods containing fermentable carbohydrates. Reduced intake of sweeteners (sorbitol, mannitol, fructose), which are constituents of natural and processed foods (apple and grape juice, bananas, nuts, and raisins), may alleviate flatulence, bloating, and diarrhea. Patients with evidence of lactose intolerance should reduce their intake of milk and dairy products. A low-fat diet may reduce postprandial abdominal symptoms.

Dietary fiber supplements may soften stool and improve the ease of evacuation. A bland bulk-producing agent may be used (raw bran, starting with 15 mL with each meal, supplemented with increased fluid intake). Alternatively, psyllium hydrophilic mucilloid with two glasses of water may be used. However, excessive use of fiber can lead to bloating and diarrhea, so fiber doses must be individualized. Occasionally, flatulence may be reduced by switching to a synthetic fiber preparation (methylcellulose).

Psychologic stress, anxiety, or mood disorders should be identified, evaluated, and treated.

Regular physical activity helps relieve stress and assists in bowel function, particularly in patients with constipation.

ULCERATIVE COLITIS

Ulcerative colitis (UC) – is the chronic inflammatory disease of large bowel, mainly of its proximal section, with the ulcerative and necrotic changes of the colonic mucosa, is characterized by the relapsing, progressive course. Clinical manifestations include periodic bloody diarrhea, which is frequently complicated by intestinal hemorrhages, perforation, stenosis of bowels, and sepsis.

MODERN VIEWS ON THE ETIOPATHOGENESIS OF IBD

In recent years, the biggest advantage is given to immunogenetic theory of IBD. Moreover, factors such as viruses, bacteria and bacterial products (endotoxin, peptidoglycans of cell wall), food (soy and milk proteins) with a combination of neuro-psychological, informational and physical overload, often against the background of adverse environmental impacts (urban dwellers suffer more) are considered as potential participants of pathogenesis and specific triggers that cause the beginning of a chain reaction.

Proofs of autoimmune nature of IBD

General criteria for autoimmune inflammation	Criteria for confirmation of the autoimmune nature of IBD
The presence of anti-tissue antibodies	60-70% of patients with IBD have high titer of anticolononic autoantibodies
The presence of lymphocytic and plasmocytic infiltration at inflammation site	The morphologic substrate of IBD is a nonspecific immune inflammation of the colonic wall together with massive infiltration by lymphocytes and plasma cells
A positive response to treatment with corticosteroids and immunosuppressive drugs	Corticosteroids and immunosuppressive drugs are widely used in patients with IBD. The efficacy of this treatment is 60-85%
The presence of systemic lesions in combination with other autoimmune diseases	IBD is often associated with autoimmune diseases: hemolytic anemia, interstitial fibrosis of the lung tissue, thyroiditis
Connection with one or more HLA-antigenes	Connection of IBD with various HLA-antigenes is determined in different countries.

MAJOR COMPONENTS OF IBD PATHOGENESIS

Endogenous factors of pathogenetic predisposition of pituitary-adrenal system	Imbalance of adaptive secretion of hormones: the increased production of growth hormone and decreased secretion of cortisol and insulin, which leads to increased motility, paralytic dilation of vessels, increased permeability of the vascular wall, disturbance of microcirculation and mucosal edema, which leads to disruption of trophic processes in colonic cells
Endogenous factors of genetic predisposition at the level of endocrine cells of colonic mucosa	Increased production of inflammatory hormones – vasointestinal peptide and reduced production of antiinflammatory neuropeptides (bombesin, somatostatin), which leads to dysmotility and microcirculation disorders, trophic derangements of enterocytes.
Acquired or congenital defect of antigen-induced suppression (epithelial cells of normal colon activate antigen nonspecific T-suppressors)	In IBD colonic cells stimulate T-helpers, which leads to increased local reactivity and results in systemic reactions to antigens of normal intestinal contents. Activation of T-helpers leads to release of inflammatory cytokines: tumor necrosis factor, platelet activating factor, leukotrienes, and interleukins 1, 6 and 8.
Congenital or acquired increase of enterocytes' genes exposure, responsible for the production of nitric oxide	Nitric oxide is produced in excessive quantities. It causes the following effects: relaxation of smooth muscles, damage of endothelial cells, increase of permeability of capillaries, and stimulation of platelet aggregation. All these effects amplify inflammatory responses.
Reduced production of interferon by lymphocytes	This leads to an insufficient activation of macrophages for antigen processing. As a result an excessive intake of antigen into the body becomes possible, which leads to increased production of antibodies: immunoglobulins G and A.

CLINICAL MANIFESTATIONS

Clinical manifestations depend on the duration of the disease, the spread of the pathological process in the colon (proctitis, proctosigmoiditis, left-side colitis, total ulcerative colitis), and the severity. The main signs of the disease include diarrhea, blood in feces, sometimes with mucus and pus, mild pain in the abdomen, fever and weight loss.

DIARRHEA is caused by multiple pathogenetic factors:

- 1) increased exudation of fluid into the intestine;
- 2) increased formation of mucus in intestinal wall;
- 3) increased loss of fluid and potassium with feces - up to 200 ml or more per day;
- 4) disorders of the binding of sodium and water by affected intestinal mucosa;
- 5) decreased motor activity, accelerated transit of colonic contents;
- 6) loss of reservoir function of the rectum - even a slight increase in the volume of intestinal content leads to increase of intraluminal pressure, urge to defecate and tenesmus.

DEFECATION at the beginning of disease may be normal, sometimes with a tendency to constipation, which is associated with spasm of the affected part of the colon and is observed in 30-50% of patients with proctosigmoiditis. In the most severe cases, the frequency of bowel movements increases to 20-30 times a day or more. Along with increase of frequency of bowel movements, the feces lose the fecal character.

THE DISCHARGE OF MUCUS WITH FECES is typical for the initial stages of the disease.

BLEEDING FROM THE RECTUM is a typical early symptom of UC. The disease is characterized by easy vulnerability, loosening, plethora of rectal mucosa, which leads to occurrence of blood in feces. Ulceration of the intestinal wall is accompanied by purulent inflammation and the discharge of pus. In the most severe cases a tissue detritus is discharged from rectum; it contains fragments of damaged intestinal mucosa. In case of malignant course of disease there is a constant urge to defecate accompanied by the discharge of watery feces, which consist of blood, pus and mucus. The skin maceration of perineum might develop.

PAIN SYNDROME and its severity depends on the form and severity of the disease. Spasmodic pain in the lower abdomen preceding the urge to defecate is typical for acute forms. This relationship disappears along with the transformation of intestine into rigid tube, which is unable to perform peristalsis. In case of chronic course there is mild periodic pain, heaviness in the lower abdomen and in the left iliac region.

APPETITE in case of pronounced disease is decreased or absent.

NAUSEA, VOMITING, a feeling of heaviness in the epigastric region are typical for severe course of UC.

Progressive weight loss is observed in acute forms and severe exacerbations, accompanied by marked intoxication. Diarrhea syndrome leads to dehydration and exhaustion of the patient. Weight loss can reach 40-50%, and may lead to marked adynamia, protein-deficient edema of the lower extremities.

Often UC is accompanied by psycho-emotional disorders and personality changes.

In case of disease occurrence in childhood, an infantilism develops with a lag of physical and mental development. Women with UC often have disorders of menstrual cycle.

DATA OF PHYSICAL EXAMINATION

In mild disease abnormalities may be absent.

EXHAUSTION, PALLOR and dryness are observed in patients with severe UC. Sometimes there is icteric sclera color. In severe cases - signs of dysfunction of the cardiovascular system: muted tones of the heart, hypotension, and tachycardia caused by decreased blood volume (BV).

FEVER is an important clinical symptom caused by suppurative destructive process in the wall of the colon.

INJURY OF MUCOSA of tongue and oral cavity is formed according to the progression of the disease. First there is white film on the tongue upper surface and teeth prints on its sides. Later, tongue becomes dry (especially in the presence of complications: toxic dilatation of colon perforation). Aphthous stomatitis often develop in patients with severe UC.

BLOATING is observed in severe cases. With the occurrence of intestinal obstruction or peritonitis abdomen becomes swollen and asymmetrical. In case of peritonitis the percussion sound becomes dull at the sides of abdomen. The great diagnostic value has the symptom of disappearance of hepatic dullness and its replacement to local tympanitis.

In advanced cases, the extraintestinal systemic complications typically occur and include arthritis, chronic active hepatitis, skin lesions and others.

In mild cases, palpation may detect tenderness in the left iliac region. Blumberg's, Val's, Sklyarov's symptoms usually occur in case of the development of complications.

On auscultation a peristaltic sounds often can be determined even in case of peritonitis or toxic dilation.

The nature and severity of symptoms depends on the individual peculiarities of the disease course and the presence of complications.

ADDITIONAL RESEARCH METHODS

CBC - hypochromic anemia, leukocytosis or leukopenia, accelerated ESR.

BLOOD ALBUMIN FRACTIONS. Hypoproteinemia also dysproteinemia: an increase in the level of alpha -1 and alpha-2- globulins, reduction of the albumin- globulin coefficient.

ACUTE-PHASE REACTANTS - increase of CRP, seromukoid, fibrinogen, sialic acid, ceruloplasmin, thymol test.

ELECTROLYTE TESTS – electrolyte imbalance - lack of potassium, sodium, calcium and chlorides in the blood serum.

IMMUNOLOGICAL TESTS - T- and B-lymphocytes count, a change in the T- helpers to T -supressors ratio (autoimmunnic genesis of disease). Contents of Ig A, M and G increase.

ENDOSCOPIC STUDY - rectosigmoidoscopy and colonoscopy with the biopsy. On examination, the colon mucosa exhibit morphological changes, the nature of which depends on the stage and form of the disease.

In mild UC in the active stage - inflammatory changes mainly involve rectum with diffuse hyperemia of the mucosa, pronounced whitish layers on intestinal wall, absence of vascular pattern, presence of erosions and single superficial ulcers.

In moderate form of UC - mostly left-sided lesions of the colon, "granular" mucosa, pronounced tendency to contact bleeding, hemorrhages, erosions and single superficial ulcers of irregular shape, covered with mucus, fibrin and pus.

In severe - total destruction of colon with severe necrotizing inflammation, spontaneous bleeding, purulent exudate, microabscesses and pseudopolyps of different shape and size.

Stricture formation is typical for UC, sometimes malignization might occur in place of organic narrowing.

RADIOLOGY

On plain film the following changes can be determined: shortening of the colon, loss of haustration, toxic dilatation of colon (toxic megacolon). When perforation appears - free gas can be seen under the diaphragm.

Acute forms of UC are characterized by "granular" mucosa, absence of fecal shadows in the lumen of the intestine, the presence of single or numerous ulcers, spotty relief of mucosa, islets of unchanged mucosa and toxic dilation of intestine (over 6 cm).

Chronic forms of UC are characterized by increased rectorenal space "granular" mucosa, loss of haustration, 'tube' appearance of colon, pseudopolyps presence.

X-ray is used in case of UC to determine lesion length, to provide the differential diagnosis with CD, diverticulitis, ischemic colitis, and to detect the signs of malignization.

ULTRASONOGRAPHY

Study the cross-sectional images of the affected areas of the intestine, measure its diameter, the size of the peripheral parts, specify the length of the disease process.

DIAGNOSTIC CRITERIA OF ULCERATIVE COLITIS

(after Omge, 1993)

1. Specific:

- 1) Presence of a diarrhea and/or rectal bleeding over 6 weeks;
- 2) Presence of mucosal inflammation with hemorrhages and/or ulcers on endoscopy;
- 3) Histological study of biopsy specimen.

2. Typical:

- 1) Only endoscopic data are present (while clinical data are absent);
- 2) Presence of clinical data; on endoscopy - only erythema;
- 3) Presence of clinical and endoscopic data while absent histological data.

3. Possible:

- 1) Presence of some clinical data, however not confirmed by other diagnostic methods.

THE DIFFERENTIAL DIAGNOSIS

UC must be differentiated from the following diseases:

1. Infectious diseases: bacterial and amoebic dysentery, salmonellosis, gonorrheal proctitis, intestinal tuberculosis.
2. Precancerous disease: diffuse colonic polyposis.
3. Tumors of the intestines.
4. Colitis: pseudomembranous, diverticulosis, ischemic.
5. Crohn's disease.

CLASSIFICATION

1. By course:

- Acute form(5%)
- Chronic continuous course (10%)
- Chronic relapsing course (85%)

2. By the extent of process:

- Total colitis
- Left side colitis
- Proctosigmoiditis
- Proctitis

3. By degree of severity:

- Severe
- Moderate
- Mild

4. By presence of extraintestinal signs

5. By presence of complications

6. By stages of disease:

- Active
- Remission

7. By the degree of severity:

a). Severe course:

- Diarrhea more than 6 times per day with blood
- Temperature higher than 37,5 C
- Tachycardia higher than 90/min
- Anemia (decrease of Hb level less than 75% of normal)
- Increase of ESR more than 50 mm/hr

b). Moderate course: between mild and severe

c). Mild course:

- Diarrhea less than 4 times per day
- Normal temperature
- Anemia (Hb level not lower than 100g/l)
- ESR less than 30 mm/hr

COMPLICATIONS

LOCAL COMPLICATIONS: perforation, hemorrhage, stricture, pseudopolypsis, toxic dilation, intestinal fistulae, malignancy.

SYSTEMIC COMPLICATIONS: Reactive hepatitis, toxic hepatitis, sclerotic cholangitis, steatitis, pyoderma gangrenosum, episcleritis, polyarthritis, unspecific pustulous dermatosis, secondary immune deficiency.

TREATMENT OF UC

- Diet
- 5-Aminosalicylic acid (5-ASA)
- Corticosteroids and immunomodulators
- Anticytokine drugs
- Loperamid for symptomatic relief
- Surgery

General management: Avoiding raw fruits and vegetables limits trauma to the inflamed colonic mucosa and may lessen symptoms. A milk-free diet may help but need not be continued if no benefit is noted.

Mild left-sided disease: Patients with proctitis, or colitis that does not extend proximally beyond the splenic flexure, are treated with 5-ASA (mesalamine) enemas 1-2 times a day depending on severity. Suppositories are effective for more distal disease and are usually preferred by patients. Corticosteroid and budesonide enemas are slightly less effective but should be used if 5-ASA is unsuccessful or not tolerated. Once remission is achieved, dosage is slowly tapered to maintenance levels. Oral 5-ASA drugs theoretically have some incremental benefit in lessening the probability of proximal spread of disease.

Moderate or extensive disease: Patients with inflammation proximal to the splenic flexure or left-sided disease unresponsive to topical agents should receive an oral 5-ASA formulation in addition to 5-ASA enemas. High-dose corticosteroids are added for more severe symptoms; after 1 to 2 weeks, the daily dose is reduced by about 5 to 10 mg each week. Immunomodulator therapy with azathioprine or 6-mercaptopurine can be used in patients who are refractory to maximal doses of 5-ASA and would otherwise need long-term corticosteroid therapy. Additionally, infliximab is beneficial in some patients and may be considered for those refractory to immunomodulator or corticosteroid therapy as well as those who are corticosteroid dependent.

Severe disease: Patients with > 10 bloody bowel movements per day, tachycardia, high fever, or severe abdominal pain require hospitalization to receive high-dose IV corticosteroids. 5-ASA may be continued. IV fluids and blood transfusion are given as needed for dehydration and anemia. The patient must be observed closely for the development of toxic megacolon. Parenteral hyperalimentation is sometimes used for nutritional support but is of no value as primary therapy; patients who can tolerate food should eat.

Patients who do not respond within 3 to 7 days should be considered for IV cyclosporine or infliximab or else for surgery. Patients who do respond to a corticosteroid regimen are switched within a week or so to prednisone 60 mg per os once/day, which may be gradually reduced at home based on clinical response. Patients who are started on IV cyclosporine and respond to therapy are switched to oral cyclosporine and concomitant azathioprine or 6-mercaptopurine.

Oral cyclosporine is continued for about 3 to 4 months, during which time corticosteroids are

Fulminant colitis: If fulminant colitis or toxic tapered and cyclosporine levels are closely monitored. megacolon is suspected, the patient should (1) stop all antidiarrheal drugs; (2) take nothing by mouth and have inserted a long intestinal tube attached to intermittent suction; (3) receive aggressive IV fluid and electrolyte therapy with 0.9% NaCl, and potassium chloride and blood as needed; (4) be treated with high-dose IV corticosteroids or cyclosporine; and (5) receive antibiotics (metronidazole 500 mg IV every 8 h and ciprofloxacin 500 mg IV every 12 h). Having the patient roll over in bed from the supine to prone position every 2 to 3 h may help redistribute colonic gas and prevent progressive distention. Passage of a soft rectal tube may also be helpful but must be done with extreme caution to avoid bowel perforation.

If intensive medical measures do not produce definite improvement within 24 to 48 h, immediate surgery is required or the patient may die of sepsis caused by bacterial translocation or even perforation.

Maintenance therapy: After effective treatment of an exacerbation, corticosteroids are tapered based on clinical response and then stopped because they are ineffective as maintenance. Patients should remain on 5-ASA drugs indefinitely—oral or rectal, depending on location of disease—because stopping maintenance therapy often allows disease relapse. Dosage intervals for rectal preparations may be gradually lengthened to every 2nd or 3rd day.

Patients who cannot be withdrawn from corticosteroids should be given azathioprine or 6-mercaptopurine. Also, infliximab is becoming more widely accepted as maintenance therapy for UC as well as for Crohn's disease.

Loperamide for symptomatic relief: 2 mg per os 2-4 times a day is indicated for relatively mild diarrhea; higher oral doses (4 mg in the morning and 2 mg after each bowel movement) may be required for more intense diarrhea. Antidiarrheal drugs must be used with extreme caution in severe cases because they may precipitate toxic dilation.

Surgery: Nearly one third of patients with extensive UC ultimately require surgery. Total proctocolectomy is curative: Life expectancy and quality of life are restored to normal, the disease does not recur (unlike Crohn's disease), and the risk of colon cancer is eliminated.

Emergency colectomy is indicated for massive hemorrhage, fulminating toxic colitis, or perforation. Subtotal colectomy with ileostomy and rectosigmoid closure or mucous fistula is usually the procedure of choice because most critically ill patients cannot tolerate more extensive surgery. The rectosigmoid stump may be electively removed later or may be used for ileoanal anastomosis with a pouch. The intact rectal stump should not be allowed to remain indefinitely because of the risk of disease activation and malignant transformation.

Elective surgery is indicated for cancer, symptomatic strictures, growth retardation in children, or, most commonly, intractable chronic disease resulting in invalidism or corticosteroid dependence. Colectomy is also done for high-grade and perhaps even low-grade mucosal dysplasia

confirmed on pathologic consultation, unless the dysplasia is limited exclusively to a completely excisable polyp. The elective procedure of choice in patients with normal sphincter function is restorative proctocolectomy with ileoanal anastomosis. This procedure creates a pelvic reservoir or pouch from distal ileum, which is connected to the anus. The intact sphincter allows continence, typically with 8 to 10 bowel movements/day.

CRON'S DISEASE

The Crohn's disease (CD) - nonspecific, segmental, transmural inflammation, which might appear in any section of gastrointestinal tract, but is more frequent in the distal part of colon. It has the chronic relapsing nature with the development of intestinal (stricture, stenosis) and extra-intestinal manifestations (erythema, episcleritis, mono- and polyarthritis, hepatitis and other).

It is important to know: UC impairs exclusively colonic mucosa, CD – might impair any section of digestive tract and usually involves all layers of intestinal wall.

CLASSIFICATION OF CD

1. CD of the small intestine (duodenum, jejunum, ileum).
2. CD of the large intestine.
3. Other forms of CD (small and large intestine).
4. Undefined CD.

By the localization of process: granulomatous esophagitis, gastritis, enteritis, ileocolitis, colitis; regional ileitis, terminal ileitis. Ileocolitis is the most frequent type of disease.

CLINICAL MANIFESTATIONS

Clinical manifestations vary depending on the localization and course of disease. In most cases CD develops slowly. In case of acute form of terminal ileitis symptoms usually occur unexpectedly. The course of the disease is usually recurring. The following syndromes are the most typical ones in CD:

PAIN SYNDROME – is characterized by pain of varying intensity, constant, is usually localized in the lower abdomen, sometimes has colic character.

DYSKINETIC SYNDROME - anorexia, nausea, vomiting, diarrhea.

MALABSORPTION SYNDROME - occurs in severe cases, is accompanied by hypovitaminosis, endocrine and electrolyte disorders.

Common symptoms - fever (low grade or hectic) and weight loss.

OBJECTIVE DATA

Objectively, there is progressive weight loss, skin pallor. Palpation reveals tenderness in the right and left iliac region, sometimes in epigastrium, mezogastrium and right subcostal area. The formation of palpable tumor is possible in the period of pronounced clinical manifestations at the site of the pathological process.

The size of the liver gets increased, liver edge becomes painful. Sometimes there are extraintestinal manifestations of Crohn's disease – gallstones; oxaluria, which sometimes is getting complicated by renal colic and hydronephrosis.

ADDITIONAL DIAGNOSTIC TESTS

CBC - leukocytosis, in case of relapsing course - B-12 deficiency anemia, hypochromic anemia, eosinophilia, accelerated ESR.

BIOCHEMICAL ASSAY: Hypoproteinemia, dysproteinemia, hypergammaglobulinemia, dyslipoproteinemia, impaired glucose tolerance, changes of the contents of potassium, sodium, calcium, chloride in serum.

IMMUNOLOGICAL ASSAY - impaired cellular and humoral immunity in the form of autoimmune reactions or relative immune deficiency.

RADIOLOGY – allows specifying the localization of inflammation, obstructive process ("cord symptom"), the presence fistulas and the character of mucosal surface (ulcerative process).

ENDOSCOPY – sigmoidoscopy, colonoscopy allows to define the localization of granulomatous inflammation and to take a biopsy specimen of the intestinal mucosa.

HISTOLOGICAL STUDY - presence of morphological evidence of inflammatory and granulomatous changes in the gut.

LAPAROSCOPY allows to confirm segmental-focal lesions of the intestine.

CRITERIA OF DIAGNOSTICS (after Omge, 1993)

1. SPECIFIC:

1) Positive histomorphological data received at study of surgical material or at autopsy.

2. TYPICAL:

1) Segmental or focal lesions of intestines revealed at laparotomy (laparoscopy);

2) Histopathological finding in surgical material or in lifetime biopsy;

3) Radiological data that indicate the presence of inflammatory obstructive process or fistulas formation.

3. POSSIBLE:

1) Clinical attributes of inflammation in intestines;

2) Presence of regional enteritis;

3) Endoscopic signs of granulomatous process;

4) Radiological and endoscopic data, that do not correspond to the clinical data.

THE DIFFERENTIAL DIAGNOSIS

Differential diagnosis is made with a number of diseases:

1) ulcerative colitis;

2) infectious colitis (dysentery, yersiniosis, adenoviral and enteroviral infection, salmonellosis, typhus, paratyphoid);

3) tuberculosis, syphilis, actinomycosis of intestine;

4) helminthiasis (whipworm, pinworm, roundworm, shistosomy);

5) protozoa (amebiasis, balantidiasis);

6) tumors (benign and malignant);

7) blood diseases;

8) radiation disease;

9) systemic diseases of connective tissue;

10) chronic enterocolitis;

11) appendicitis.

DIFFERENTIAL DIAGNOSTICS OF ULCERATIVE COLITIS (UC) AND CROHN'S DISEASE (CD)

Symptoms	UC	CD
Bloody diarrhea	90-100%	50%
Rectal bleedings	Very often	Sometimes
Abdominal pain	Sometimes	Often
Perianal localization	Not typical	30-50 %
Proctitis	Almost 100%	50%
Continuity of process	Typical	Non-typical
Involvement of other departments of GIT	Not typical	Typical
Palpation of inflammatory conglomerate	Not typical	Often
Strictures	Rare	Often
Fistulas	Rare	Often
Ulcers	Superficial	Deep
Relapses after colectomy	Never	Happen
Malignization	Sometimes-20 %.	Rare

THE PECULIARITIES OF CLINICAL COURSE

Granulomatous colitis is a special form of Crohn's disease. It develops gradually. Abdominal pain, diarrhea, fever, cracks in the anal area, fistulas are observed in the initial stage of the disease. Blood in feces occurs when rectum is involved. Granulomatous colitis can be accompanied by formation of interloop fistulas, as well as with adhesions and conglomerates that are palpable in the abdomen as tumor-like formations. There is weight loss (in severe cases up to 15-20 kg), marked hypochromic anemia, hypoproteinemia, deficit of salts and vitamins. Complications develop quite often and include: massive bleeding, perforation, acute toxic dilatation of the colon, and malignization.

The peculiarities of the clinical course depend on localization: a lesion of the small intestine, colon and other parts of the digestive tract.

By activity: acute, subacute and chronic.

By severity: mild, moderate and severe course.

COMPLICATIONS

The most frequent complications are the following: perforation, massive hemorrhage, stricture, internal and external fistulas. Rarely detected ones are: skin lesions, arthritis, iritis, corneal ulcer, gallstones, oxaluria, hydronephrosis.

TREATMENT OF CROHN'S DISEASE

Therapy of the 1st stage:

1. Prednisolone orally in a daily dose first week - 60 mg, 2nd - 40 mg, 3rd - 30 mg, 4th - 25 mg, 6th - 15 mg, from 7th to 26th - 10 mg; in case of remission 27 - 52 week - 10 mg every other day.
2. 5-ASA - 1, 5-2 mg/day, or sulfasalazine - 3 mg/day.

Therapy of the 2nd stage:

1. Parenteral nutrition
2. Azathioprine 2-3 mg/kg/day (course not less than 3 month), or cyclosporine A.
3. Metronidazole 500-1000 mg/day (course not more than 4 weeks);

Therapy during remission:

1. Mesalazine- 1, 5 g/day.
2. Compensation of deficiency of B12, folic acid, zinc, etc.
3. Cholestiramin in case of biliary diarrhea and antidiarrheal drugs (loperamid).
4. High-quality nutrition.

Severe form:

Parenteral nutrition, Prednisolone 1000mg/day, hydrocortisone 300 mg/day, metronidazole 500-1000 mg/day.

After improvement - Prednisolone under the same scheme (see above)

No improvement – surgical treatment.

SURGICAL TREATMENT

Radical surgery is applied in case of complicated forms of chronic disease, and includes resection of damaged parts of large intestine.

Indications for surgical treatment:

- 1) permanent or fixed narrowing of bowel, or its obstruction;
- 2) formation of fistulas to the urinary bladder, vagina, or to the skin;
- 3) untreatable anal fissures or abscesses;
- 4) intra-abdominal abscesses, toxic dilatation or perforation of the colon.

Avoid repeated resections because short bowel syndrome may develop.

PROGNOSIS

In case of the acute form of CD prognosis is usually favorable. In chronic course of the disease process can take years.

The control of an initial level of knowledge:

1. What pathogenetic mechanisms cause disorders of defecation?
 - A. Intestinal hypersecretion, acceleration of a chymus passage, decrease of absorption of bile acids
 - B. Flatulence, enzymopathy
 - C. Spastic contraction of intestines
 - D. Decrease of contents of electrolytes and vitamins
 - E. Hypovitaminosis
2. What gut microflora is considered to be obligate?
 - A. Bifidobacteria, lactobacilli, Escherichia coli
 - B. Proteus, micrococci, enterococci
 - S. Escherichia coli, Proteus, Staphylococcus
 - D. Anaerobes, lactobacilli
 - E. Micrococci, enterococci, bacteroides
3. Which of the listed factors are **not** caused by microflora of intestines?
 - A. Creation of sour ph-environment in intestines
 - B. Synthesis of vitamins and biologically active substances
 - C. Increase of intestinal peristalsis
 - D. Synthesis of amylase, lipase, tripsin.
 - E. Increase immunoreactivity of an organism
4. What method can assist in diagnostics of disorders of bowel motility?
 - A. Irrigoscopy
 - B. Colonoscopy
 - C. Passage of barium through intestines under control after 24, 48 and 72 hours
 - D. Endoscopy
 - E. None of listed above.
5. The main reason for pain syndrome in IBS is:
 - A. Dynamic intestinal obstruction
 - B. Increase of mucus production
 - C. Trombosis of arteries and veins of mesentery
 - D. Lesion of intramural nerve plexus
 - E. Increased perception of pain impulses
6. What departments of GIT can get involved in pathologic process in case of CD?
 - A. Ileum
 - B. Entire digestive tract
 - C. Large intestine
 - D. Small intestine
7. Ulcerative colitis is:
 - A. Inflammation of entire GIT
 - B. Necrotizing inflammation of mucosa of small intestine
 - C. Necrotizing inflammation of mucosa of large intestine
 - D. Disease which begins in oral cavity
 - E. Disease related to stomach ulcer
8. Extraintestinal signs of ulcerative colitis include:
 - A. Weight loss

- B. Fever
 - C. Arthralgia
 - D. Erythema nodosum
 - E. Everything listed above
9. The basic method of diagnostics of CD is:
- A. Radiology of GIT
 - B. Irrigoscopy
 - C. Rektosigmoidoscopy
 - D. Endoscopy with biopsy
 - E. Ultrasonography
10. Which one of the listed below symptoms doesn't belong to IBS?
- A. Non-painful diarrhea
 - B. Progression of symptoms
 - C. Steatorrhea
 - D. Morbid depression
 - E. Gluten intolerance

The control of an initial level of knowledge, correct answers:

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

The control of a final level of knowledge:

1. What are the earliest permanent signs of CD:
 - A. Diarrhea
 - B. Abdominal pain
 - C. Fever
 - D. Bloody stool
 - E. Pus in stool
2. The mechanism, which has no value in the development of IBS:
 - A. Motoric dysfunction
 - B. Visceral hyperalgesia
 - C. Presence of psychopathy
 - D. Cholestasis
 - E. Intestinal dysbiosis
3. Which one of the listed below symptoms contradict the diagnosis of IBS:
 - A. Abdominal pain which relieves after defecation
 - B. Lactose intolerance
 - C. Discharge of mucus with feces
 - D. Abdominal swelling
 - E. Disbacteriosis
4. What is not typical for IBS:
 - A. Vasospastic reaction
 - B. Feeling of lump in the throat
 - C. Urinary disorders
 - D. Absence of appetite and loss of weight
 - E. Sexual dysfunction
5. The treatment of UC includes:
 - A. Antibiotics
 - B. Preparations of 5-ASA
 - C. Antacids
 - D. Preparations of bismuth
 - E. Metronidazol
6. The treatment of CD includes :
 - A. Hepatoprotectors,
 - B. Spasmolytics
 - C. Glucocorticoids, cytostatics
 - D. Antiviral medications, blockers of H₂- histamine receptors
 - E. Antacids and vitamins
7. What belongs to Intestinal complications of UC?
 - A. Toxic megacolon
 - B. Perforation
 - C. Bleeding
 - D. Carcinoma
 - E. Everything listed above
8. What helps to perform differential diagnosis of UC and dysentery:
 - A. Irrigoscopy
 - B. Colonoscopy

- C. Bacteriological test of feces
- D. Rectosigmoidoscopy
- E. Clinical analysis of feces

9. What is the indication for surgical treatment of UC?

- A. Erythema nodosum
- B. Toxic dilation of large intestine
- C. Combination with stomach ulcer
- D. Presence of sclerosing cholangitis
- E. Everything listed above

The control of a final level of knowledge, correct answers:

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

Case-based questions.

1. The man of 38 years old complains on cramp-like pains in left iliac area and frequent liquid excrements 6-10 times a day with blood and pus, general weakness, loss of weight. He has been sick for more than 5 years. During the palpation the abdomen is painful in left iliac area. Liver +2 cm.; CBC - Hb - 80 g/L, er.- $3,5 \times 10^{12}$ /L, ESR - 34 mm/h. What disease is the most probable cause for development of anemic syndrome in this patient?

- A. Cancer of intestines**
- B. Chronic enteritis**
- C. Cron's disease**
- D. Polyposis of intestines**
- E. Ulcerative colitis**

2. The man of 48 years old complains on dull pain in lateral parts of belly which relieve after defecation and passage of gases; alternation of diarrhea and constipation. He had dysentery 2 years ago. On abdominal palpation – tenderness, alternation of spastic and atonic sections of large intestine, rumbling. What method of examination is the most informative one for making of the diagnosis:

- A. Coprocytogram in dynamics**
- B. Manual examination of rectum**
- C. Sigmoidoscopy**
- D. Colonoscopy**
- E. Ultrasonography**

3. The patient of 32 years old took massive antibacterial therapy. Complains on pains in abdomen, frequent liquid excrements (4-6 times a day), and general weakness. On palpation abdomen is soft, tender in the lower parts, liver and spleen are not enlarged. Prescription of what preparation is reasonable in this case?

- A. Imodium**
- B. Panzynom**
- C. Essentiale**
- D. Motilium**
- E. Linex**

4. Patient of 45 years old has diarrhea 6-8 times a day, feces contain mucus, blood and pus. Body temperature is 37,6; abdominal pains during palpation. He suffers from formation of internal and external fistulas from time to time. The diagnosis is Crohn's disease. What sign differentiates this disease from ulcerative colitis?

- A. Abdominal pain during palpation**
- B. Diarrhea**
- C. Fistulas**
- D. Blood in feces**
- E. Fever**

5. Man of 26 years old, complains on cramp-like pains in abdomen, frequent defecations with liquid feces with mucous and blood. He has been sick for 3 years, his weight decreased by 14 kg. T- 37,6 C; abdomen is soft, tender when palpated along the large intestine, especially in the left side. Irrigoscopy shows the signs of narrowing of large intestine, loss of haustration, the contours are uneven. What is the most probable diagnosis?

- A. **Ulcerative colitis**
- B. **Tuberculosis of intestines**
- C. **Intestinal amebiasis**
- D. **Crohn's disease**
- E. **Irritated bowel syndrome**

6. The patient of 55 years old, complains on swelling and rumbling in abdomen; increased passage of gases; frequent defecations of foamy character, with a sour smell, which appear after intake of dairy products. How is this syndrome named?

- A. **Syndrome of fermentative dyspepsia**
- B. **Syndrome of putrefactive dyspepsia**
- C. **Syndrome of fatty dyspepsia**
- D. **Syndrome of a dyskinesia**
- E. **Syndrome of malabsorption**

7. The Patient of 41 years complains on frequent defecations (10-12 times a day) with mucus and blood; pain in the lower abdomen, loss of weight. He has been sick for 2 years. The diagnoses of acute infectious diseases were excluded. Abdomen is soft, but there is tenderness during palpation of sigmoid colon. Colonoscopy - in the certain part of sigmoid colon the mucosa is pale, with pseudopolyps and flat superficial ulcers. What is the preliminary diagnosis?

- A. **Polyposis of intestines**
- B. **Chronic colitis**
- C. **Chronic pancreatitis**
- D. **Crohn's disease**
- E. **Ulcerative colitis**

8. The patient of 19 years old, complains on cramp-like pain in abdomen, frequent defecations 6-8 times a day with mucus and blood. He has been sick for 2 years, has lost 12 kg of weight. Abdomen is soft, tender when palpated along the large intestine, especially at the left side, sigmoid colon is spastic. Irrigoscopy - the large intestine is narrowed, haustras are absent, contours are uneven, the symptom of "drain pipe" is present. What diagnosis is the most probable one ?

- A. **Chronic enterocolitis**
- B. **Ulcerative colitis**
- C. **Intestinal amebiasis**
- D. **Tuberculosis of intestines**
- E. **Crohn's disease**

9. The patient of 48 years old, complains on spastic pains in the lower abdomen, which worsen after psycho-emotional stress. Defecations are intermittent: 2-3 defecations after awakening alter with constipation during next 1-2 days. There is moderate pain during palpation of sigmoid colon. Proctosigmoidoscopy is painful because of spastic condition of intestines; the mucosa of intestines is not changed; there is a lot of mucus in the lumen. What disease is the most probable one?

- A. **Ulcerative colitis**
- B. **Crohn's disease**
- C. **Irritated bowel syndrome**
- D. **Acute ischemia of intestine**
- E. **Syndrome of malabsorption**

10. The patient of 51 years old, complains on frequent liquid defecations with mucus and blood streaks, diffuse pain in inferior and lateral parts of abdomen, weight loss of 6 kg during 1

month, low grade fever. The abdomen is soft, sigmoid colon is tender, spastic, rumbling. What is the most possible disease in this patient?

- A. **Intestinal enzymopathy**
- B. **Bacillary dysentery**
- C. **Sprue**
- D. **Ulcerative colitis**
- E. **Helminthiasis**

CORRECT ANSWERS

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

Control questions.

Give definition of UC, Crohn's disease, IBS;
Basic clinical syndromes of IBD;
Data of physical examination of IBD patients;
Clinical presentation of UC;
Clinical presentation of Crohn's disease;
Clinical presentation of IBS;
Methods of IBD diagnostics;
Complication of IBD;
Approach of treatment of UC and Crohn's disease.
Approach of treatment of IBS.
Lifestyle and diet therapy at IBS.
Medical therapy of IBD depending on severity and activity of disease
Preventive measures for IBD and IBS.

Practical tasks.

- 1. To make examination of patients with IBD and IBS.
- 2. To provide interpretation for the data of laboratory test.
- 3. To provide interpretation for the data of instrumental tests.
- 4. To make differential diagnosis between IBD and IBS.
- 5. To list complications of IBD.
- 6. To write recipes concerning the therapy of IBD and IBS.

The report of clinical analysis of the patient (the uniform form)

Name, Surname _____

Age _____ Profession _____

Complaints _____

Anamnesis morbi

Considers itself as the patient with _____ when for the first time have appeared

Last aggravation _____

Anamnesis morbi

Results of physical examination of the patient:

The preliminary diagnosis:

The examination plan:

Results of additional researches:

Substantiation of the clinical diagnosis:

The clinical diagnosis:

Main disease: _____

Accompanying diseases:

Complication

Treatment:

Regimen _____

Diet _____

Materials for self-preparation:

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