Clinical observation of thinning of psychogenic genesis after colectomy

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We consider the analysis of difficult clinical cases to be very useful, because it is in such cases that the importance of right thinking at the patient's bed isdemonstrated most clearly, and, at the same time, it encourages the doctor to actively self-independent thought.

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We present to our readers an interesting clinical observation that required a thorough differential diagnosis and close cooperation of physicians of various specialties in the search for the only correct answer to a complex clinical problem.

Clinical case

At the end of August 2013. in the gastroenterology department of the Donetsk Regional Clinical Territorial Medical Association (DOCTM), a patient L. was hospitalized, 56 years old, who, upon admission, complained of gravity in the epigastric region, discomfort in the right and left hypochondrium, worse after eating, periodic aching pains in the podopusal region and lower -bone parts of the abdomen, unstable stool (alternating diarrhea and constipation with a predominance of constipation), lack of urge to defecate. In addition to the main symptoms that worried the patient almost constantly, occasionally there was itching of the skin of the upper and lower extremities, nausea, belching of the air, bloating, marked general weakness; special excitement caused a decrease in body weight by 30 kgover the past 2 years.

Anamnesis of the disease

The first signs of malaise appeared 10-15 years ago, when pain for the first time appeared in the left hypochondrium and constipation. Patient obsledova familiarize residence, diagnosed with chronic pancreatitis, chronic gastroduodenitis, chronic cholecystitis. In occasion of this pathology she was regularly observed and treated at a gastroenterologist with varying success.

In September of 2009. when carrying out irrigoscopy and signs of left-sided colitis, dolichosigma, an additional loop of the ascending gut is revealed, and with a sigmoidoscopy - chronic catarrhal colitis. The recommended therapy (sulfasalazine, lactovit, bifiform complex, castor oil, candles with platyphylline, microclysters with decoction of herbs) practically did not affect the patient's condition.The patient chose her way to fight constipation - taking a variety of laxatives. In March-April 2010 Constipation increased, the act of defecation was accompanied by a pronounced pain syndrome. Aproctologic examination revealed a back internal rectal fistula, which was successfully excised in a hospital. In the post - operation period, the patient began to notice a gradual decrease in body weight.

In November 2011 the patient's condition sharply worsened, self-emptying of the intestine became impossible, there were burning pains in the right ileal region and right hypochondrium, somewhat decreasing after defecation. Somewhat later, these complaints included pain in the anus, bloating, poor gas flow, belch "rotten," nausea, dry and itchy skin, thirst at night, weight loss of 5 kg for 2 months. At the top endoscopy, the data in favor of the organic lesion of the esophagus, stomach, and duodenum were not revealed. When ultrasound examination (ultrasound) of the abdominal cavity (OBP) revealeddiffuse changes in the liver and pancreas, recorded echoes of chronic cholecystitis, gallstone disease, right-sided nephroptosis. In the

course of X-ray examination of the large intestine, incomplete rotation of the cecum (anomaly of development) was noted. During bacteriological analysis of stool samples, hemolyzing E. coli (20%), fungi of the genus *Candida albicans* (10^4). On the basis of the data obtained, a combined gastroenterological pathology was diagnosed:

- chronic colitis on the background of a congenital anomaly of the development of the intestine (dolichokolon, cecum mobile, insufficiency of the ileocecal valve) with the phenomena ofcolostasis, dysbiosis;
- chronic pancreatitis in the phase of incomplete remission;
- cholelithiasis, chronic calculous cholecystitis, inactive phase.

The patient is prescribed complex medication (dicetel, eucarbon, bifiform complex, viburkol), against which increased abdominal pain and flatulence, there were frequent unproductive urges to defecate, accompanied by the release of a large amount of mucus. Given the need to exclude acute surgical pathology, including - diverticular bowel disease, surgical consultation is recommended that exclude acute surgical pathology revealed no conclusive evidence in favor of diverticular disease of the intestine, and recommended to continue treatment at the gastroenterologist. Gradually, against the background of the continuation of the above treatment, there was some improvement in the state of health.

In February 2012. the patient's condition worsened again: the pain syndrome in hypogastrium increased, the gases ceased to flow away, general weakness increased. With suspicion of intestinal obstruction, the patient was hospitalized in a surgical hospital where operative intervention was performed in connection with chronic colonic stasis in the stage of decompensation - laparotomy, subtotalcolectomy with invagination Ileosigmoanastomosis (anastomosis diameter up to 4 cm, from the anus 25 cm of the large intestine), drainage of the abdominal cavity. Histological examination of the distal intestine showed thickening of the colon wall all along, structural features in the appendix were not found, follicular hyperplasia was detected in the lymph node of the mesentery of the colon. The postoperative period proceeded calmly, the patient noted improvement in the state of health and self-emptying of the intestine against the background of a continuing decrease in body weight.

In August 2012. the patient again went to the therapeutic department of Doktmo with complaints of progressive weight loss, expressed general weakness, rapid fatigue, difficulty in defecation. In an objective examination, attention was paid to cachexia: the body mass index (BMI) was 16.80 kg/m^2. During the laboratory-instrumental study, pathological changes in clinical analyzes of blood, urine, and most biochemical parameters (total and direct bilirubin, AST, ALT, glycosylated hemoglobin, pancreatic amylase, total and ionized calcium, magnesium, phosphorus, potassium, sodium, chlorides, copper, cortisol) were not detected. Attention was drawn to a slight decrease in the level of ceruloplasmin - 19.82 mg/dL (at the standard values of 20.0-60.0 mg/dl). Bacteriological analysis of feces again revealed signs of dysbiosis: fungi of the genus *Candida albicans* (10^5), an insufficient number of lactobacilli (10^5) and enterococci (10^3). In order to correct transversoptosis, chronic colitis and leveling ofdysbiosis, malabsorption syndrome, pancreatic insufficiency due to subtotal colectomy she overlaid invaginated ileosigmoanastomoza were appointed Tivortin, fluconazole, Hilak forte, meteospazmil,mezim, Essentiale, infezol. As part of complex drug therapy, the patient was first appointed eglonyl - a drug with a moderate antipsychotic effect, a minor antidepressant and stimulating effects. Against the background of the recommended treatment, the patient's condition improved significantly: general weakness was reduced, mood improved, although there was no significant increase in BMI.

In February 2013. During the planned laboratory examination, no changes in biochemical parameters were noted. In March 2013. the pain syndrome in the right hypochondrium increased again. And this time, in the course of laboratory examination no abnormalities in their clinical and biochemical analyzes of them have been identified. When the ultrasound examination was performed, the thickening of the gallbladder walls was noted, however, the dimensions of the

choledoch, portal vein, and the Virsung duct corresponded to the normative values. With the diagnosis of cholelithiasis, chronic calculouscholecystitis, the patient was hospitalized in the surgical department where a laparoscopic cholecystectomy. The postoperative period was uneventful. Within a month after the operation, constipation was disturbed, to combat which the patient independently took no-shpu (no effect), made enemas with tannin (a liquid mushy stool up to 5-7 r/day with an admixture of mucus appeared). In connection with the preservation of complaints and with the aim of eliminating the alternative pathology, spiral computed tomography (CT) of the abdominal organs was performed on March 28, 2013, during which confirmedcholecystectomy was confirmed, gas accumulation was observed over the diaphragmatic surface of the liver (postoperative genesis), moderate right-sided pyelocalcicectasia, moderate diffuse liver changes (which were regarded as possible manifestations of non-alcoholic fatty liver disease on the background of progressive weight loss).

In May 2013, general weakness intensified sharply, diarrhea became more common, the emergence of which was provoked by the introduction of enemas with tannin. Independently accepted linex, but-shpu, however, this treatment did not improve the condition of the patient, which was the reason for a new request for medical help. BMI 16.50 kg/m^2. During the upper endoscopy, pathological changes in the esophagus were not detected, signs of superficial gastritis and duodenitis were noted, urease test was negative. During the colonoscopy, only 35 cm of the large intestine could be inspected: its lumen spread by air, the mucous membrane all over the place is moderately edematous and hyperemic. In the field of anastomosis, the mucosa had normal properties, not visually altered. The anastomosis itself was not passable for the colonoscope - its lumen was 6-7 cm in diameter, and when trying to insert an endoscope, acute pain occurred. Histological analysis of the biopsy specimens of various parts of the colon made it possible to eliminate Crohn's disease, ulcerative colitis. After receiving the conclusion of a colonoscopy "Chronic catarrhal colitis, the condition after subtotal colectomy with invaginationIleosigmoanastomosis "the patient was recommended a course of treatment in the therapeutic department of Doktmo. In a laboratory examination, attention was drawn to a decrease in the total protein to 62 g/l, other indicators corresponded to the normative values. To correct the active phase of chronic enterocolitis and to improve the condition after the transferred colectomy, parenteral (rheosorbylact, Ringer's solution, kvamatel) and oral (creon 10 000 units for one dose, loperamide) therapy, the effectiveness of which remained insufficient. After consultation of the regional gastroenterologist to clarify the diagnosis and correction of ongoing therapy transferred to the gastroenterology department Doktmo.

Anamnesis of life

Tuberculosis, typhus, malaria, venereal diseases, HIV, viral hepatitis, blood transfusion, trauma denies. In 1970 she underwent tonsillectomy.

At the time of admission to the gastroenterology department, the patient had several concomitant diseases:

- ischemic heart disease, atherosclerotic cardiosclerosis, CH I; hypertensive disease, 2 items, cerebral atherosclerosis;
- discirculatory (hypertonic, atherosclerotic) and dyshormonal encephalopathy with disseminated organic neurologic symptoms, vasomotor cephalgia, vestibular dysfunction, pronounced asthenic-neurotic syndrome;
- fibroids of the uterus; was in post-menopause;
- right-sided nodal non-toxic goiter 1 st.; chronic thyroiditis (complicated by the development of medicamentous thyrotoxicosis in 2008 against the background of taking L-thyroxine);hypothyroidism (2009);
- diabetes mellitus type 2, easy course.

About this diverse somatic pathology and to the patient was followed up by a number of related specialists: cardiologist, neurologist, gynecologist, endocrinologist, and taking cardiovascular drugs, antidepressants, antihypertensives "on demand», L-thyroxine, with varying success.

Allergic history burdened not tolerate antibacterials group of penicillins, diphenhydramine, procaine, Baralginum, gemodez, dioxidine, nicotinic acid, motilium, contrycal, ursolizin, Essentiale,pentoksifilin, fezam, bion 3, Paxil; Has a food allergy to seafood. Hereditary anamnesis is burdened: the mother of the proband is diagnosed with chronic pancreatitis, she suffers from constipation.

Harmful habits do not have (alcohol does not abuse, the use of drugs denies).

Data of objective examination and laboratory-instrumental examination at the time of treatment (August 2013)

With objective examination, the general condition is relatively satisfactory, the position is active, the consciousness is clear. A dramatically reduced diet: height - 161 cm, weight - 41 kg, BMI - 15.82 kg/m^2. Skin and visible mucous membranes are clean, normal color, there are no traces of community-acquired injections. In the armpit, small, painless, lymph nodes are palpable. Body temperature - 36,2 ^{0}C. Thyroid gland in size is not enlarged. Musculoskeletal system without visible pathology, active and passive movements in the joints are preserved in full. Peripheral edema is absent. When palpation, the chest is resistant, painless. Thorax cylindrical percussion over the entire surface of the lungs clear lung sounds, auscultation - vesicular respiration. When examining the atrial region, abnormal pulsation is not revealed, percutaneously the boundaries of relative cardiac dullness are within the normative boundaries. Heart sounds are sonorous, activity is rhythmic, additional noise is not heard. The heart rate is 72 beats per minute, the pulse is 72 beats per minute, satisfactory qualities, rhythmic. The arterial pressure on the right arm corresponded with that on the left and was 120 and 75 mm Hg. The tongue is pink, sparsely coated with white coating, moist. The abdomen is rounded, symmetrical, not enlarged in size, actively participates in the act of breathing; on the midline of the abdomen from the xiphoid process to the navel is the postoperative scar. With superficial palpation, the abdomen is mild, moderately painful in epigastrium and in the peripodal region. Symptoms of Kera, Ortner, irritation of the peritoneum are negative. The lower edge of the liver is at the edge of the costal arch, elastic, painless. The liver does not protrude from under the edge of the right costal arch, the lower edge is smooth, smooth, painless.Dimensions of the liver according to Kurlov - 9: 8: 7 cm. The spleen is not palpable. Pasternatsky's symptom is negative from both sides. Peripheral edema is absent. Daily diuresis - up to 1.0 liters.Physiological remedies - emptying the intestine once a day, stool masses are not decorated, brown, without pathological impurities. Urination is painless, not difficult.

In the clinical analysis of blood, attention was drawn to leukocytopenia (probably a consequence of cachexia) - 2.71x10^9/L (in the control - 3,3x10^9/ l; at norm 4,0-9,0x10^9/l) against the background of unchanged level of erythrocytes (4,57x10^{12}/l), hemoglobin (128 g/l), ESR (10 mm/hour). Another finding was the detection of changes in the composition of leukocytic formula dominated segmented elements (79%; at a rate of 47-72%) due to reduction in the number of lymphocytes (14% at a rate of - 19-37%) and an unchanged level of band cells (1%), eosinophils (3%), monocytes (3%). In the biochemical analysis of blood, a minimal activity of the cytolytic syndrome was noted (AST - 30.1-48.3 U/L at a rate of 10-40 U/L, ALT - 29.4-54.2 U/L at a rate of 10-30 U/l) against the background of unchanged values of alkaline phosphatase, gamma-glutamyl transpeptidase, α-amylase, pancreatic isoamylase, lipase, blood copper, ceruloplasmin, glucose, glycosylated hemoglobin, α_1-antitrypsin,folic acid. The content of total protein and the amount of albumin were reduced, respectively, to 59 g/l and 32 g/l). These changes were interpreted as manifestations of non-alcoholic fatty liver disease, provoked by

progressive weight loss, and cachexia. All the indicators of the clinical analysis of urine corresponded to the normative indices.

Much attention is paid to the study of fecal matter. In koprologicheskom analysis of feces found in a small number of altered and unchanging muscle fibers, indigestible and digestible vegetable fiber, intracellular and extracellular starch, mucus; the presence of iodophilic flora and yeast-like fungi was noted; neutral fat, fatty acids, soaps, tumor cells, helminth eggs were not detected. Lack helminths was confirmed various additional stool studies: enrichment methods, Berman, ether-acetic deposition Safaralieva allowed to exclude the presence of helminth eggs, larvae strongiloid, eggs opistarhid pathogenic protozoa forms, respectively. Bacteriological investigation feces families protozoa pathogens are detected, and the number of bifidobacteria was slightly above the standard indicators (10^{9}), while the content of lactic acid bacteria (10^{5}) turned slightly reduced nym amid the fungi of the genus *Candida* (10^{5}) and absence of E. coli with poorly expressed enzymatic properties, hemolyzing intestinal bacillus, conditionally pathogenic flora, staphylococcus, hemolytic staphylococcus.

The content of fecal elastase-1 corresponded to the normative values (288, 1 μg/g).

Additionally, the electrolyte composition of the blood was examined. The concentration of microelements (potassium, sodium, calcium, magnesium, chlorine, serum iron) was within the regulatory values.

Investigation of hormone-producing thyroid function confirmed the preservation of its functional activity (T_3 free - 2.31 pg/ml, T_4 free - 14.35 pmol/L, thyroid stimulating hormone - 1.54 mkIE/ml) and no autoimmune destruction gland (antibodies to thyreperoxidase - 10.55 IU/ml, all of these indicators corresponded to the normative values), although the patient was on a dispensary record for hypothyroidism (see above). With ultrasound of the thyroid gland in the right lobe, an isoechogenic node (up to 1 cm in diameter) with uneven, fuzzy contours, heterogeneous structure, the presence of fluid inclusions and a hypoechogenic rim; in the left lobe a hypoechoic node (0.4 x 0, 3 cm) is visualized. Other changes on the part of the thyroid gland (size, volume, echogenicity, structure) were not detected.

In addition, the level of cortisol was determined - its values also corresponded to the normative indices: 477.3 nmol/l (171-536 nmol/l). Also conducted immunological studies: the content of antibodies to gliadin class Ig And, of IgG, transglutaminase of IgA, of IgG were within standard values. Antibodies to lamblia antigens (IgA, IgM, IgG), ascarids (IgG), toxocaram (IgG), trichinellum (IgG), opisthorchis (IgG), echinococcus (IgG) were not detected. Markers of viral hepatitis (HBsAg, HBeAg, anti-HBcor IgM, anti-HCV IgG, anti- HBe IgG) were not detected, antibodies to HIV were not detected, Wasserman's reaction was negative. In a further study of protein fractions PCR ascertained and small hyper-α_1-globulinemiya, DNA *Tropheryma whippelii* not detected.

An electrocardiogram recorded regular sinus rhythm with a heart abnormalities - 70 beats/min, was a sharp left axis deviation, the blockade of the anterior branch of the left and incomplete blockade of right bundle branch block (compared with previous electrocardiograms - without negative dynamics).

During endoscopic examination of the upper gastrointestinal tract (GIT), pathology from the esophagus was not revealed, signs of superficial gastritis and duodenitis were noted, urease test was negative. A biopsy of the stomach mucosa, 12 duodenal ulcer, the initial part of the jejunum was performed. Excluded celiac disease, Whipple's disease, amyloidosis, cancer. Separately, we emphasize that the villi of the duodenum were not shortened, not thickened, the enlarged lymphatic vessels and PAS- positive foamy macrophages were absent.

When performing ultrasound imaging, visualized enlarged lymph nodes (maximum size - 1.27 cm) in the gates of the liver (para-aortic). The liver is not enlarged in size, the contours are even, the parenchyma granularity, increased echogenicity of the parenchyma and intrahepatic bile ducts with the preserved dimensions of the hepatic veins, portal vein. Sonographic signs of pathology from the side of the remote gallbladder bed, spleen were not detected. There was a

decrease in the pancreas in size (head - 1.49 cm, body - 0.34 cm, tail - 1.39 cm), wavy contour, diffuse heterogeneity of structure, increased echogenicity glands; the usual size of the viral duct.

Carrying out a radiographic examination of the gastrointestinal tract and examining the passage of barium through the intestine allowed obtaining data in favor of enteritis and confirming the absence of significant organic pathology from the esophagus, stomach, duodenum.

During the spiral CT of the abdominal cavity and retroperitoneal space with oral contrasting, the diffuse enlargement of the liver in size was noted while maintaining the structure and the absence of additional formations and foci of pathological density. Despite the fact that with ultrasound OBP data on the reduction in the size of the pancreas and the increase in lymph nodes in the gates of the liver, the results of spiral CT have not confirmed these data. Pathological changes from the spleen, pancreas, adrenal glands, kidneys, ureters, uterus and ovaries, bone structures at the level of the study are not revealed. An accumulation of excess gas in the small and large intestine was found, and a conclusion was made about the presence of CT-signs of enterocolitis.

The patient was advised by Prof. A. Zubov, the cat of which is an ultrasound expert class. The consultant confirmed the presence of the ovoid form in the right lobe of the colloidal node up to 1.0 cm in diameter, while the intensity of blood flow and angioarchitectonics were preserved. A free liquid was found in the pericardium (which we interpreted as a manifestation of hypoalbuminemia), there was an increase in echogenicity of the liver without weakening the ultrasound signal and depletion of the vascular pattern. In the areas of local compaction along the vessels of the basin of the own veins of liver of medium caliber, signs of recanalization of the umbilical vein are not revealed.

With additional echocardiography, an additional transverse left ventricular trabecula was detected in the apex region and separation of the pericardium leaves in the right part to 4-6 mm was noted, which is regarded as the presence of a small amount (up to 80-100 ml) of free fluid in the pericardial cavity. Pulmonary hypertension was not diagnosed: systolic pressure in the pulmonary artery was 21 mm Hg. Art. The signs of an initial diastolic dysfunction of the left ventricle, cardiosclerosis, but suspicions of a violation of the local contractility of the myocardium are not confirmed.

During the chest X-ray examination in the upper lobe of the right lung, a thin-walled cavity measuring up to 8.0 cm in diameter was detected due to an air bullet. In the upper lobe of the left lung, another thin-walled cavity of small dimensions is visualized by a thin-walled cavity also due to an air bullet. In other parts of the lungs, pathological shadows were not detected, a flattening of the diaphragm domes and fixation of the left dome with a soldering were observed, changes in the lung sines were not detected.

The patient is counseled by many related specialists. The proctologist expressed his opinion about the absence of signs of intestinal obstruction and indications for surgical treatment, and also stressed that the revealed changes do not explain the progressive decrease in body weight.

The pulmonologist treated the revealed radiographic changes as bullous emphysema of the upper lobes of both lungs with the presence of a giant (8 cm) bull in the upper lobe on the right with pulmonary insufficiency of the 1st degree. Thoracic surgeon shared the opinion of his colleague and considered conducting surgical treatment unnecessary.

The neurologist diagnosed dyscirculatory encephalopathy of the 2nd degree with cephalgia, disseminated neurological symptoms, pronounced astheno-neurotic syndrome in the stage of decompensation. The specialist recommended additional medicamentous therapy with mildronate, nootropil, actovegin, bisoprolol, cefavor (a combined homeopathic preparation containing ginkgo biloba, mistletoe and hawthorn).

The ophthalmologist diagnosed angiopathy of the reticular membrane and myopia of the middle degree of both eyes.

The cardiologist assessed complaints, anamnestic, objective and instrumental data as follows: CHD, atherosclerotic cardiosclerosis, grade 1 heart failure with preserved systolic and initial diastolic left ventricular dysfunction, NYHA functional class III. Hypertensive disease of the 1st stage (crises according to medical records), risk 3. Dysmetabolic cardiomyopathy. Hydropericardium. The patient is recommended to monitor blood pressure, with his steady increase - take lisinopril 5-10 mg 1-2 r/day.

The endocrinologist, diagnosing the subatrophy of the thyroid gland in a state of euthyroidism, recommended repeating the determination of the level of the thyroid - stimulating hormone after 6 months and believed that there was no convincing data for diabetes mellitus.

The allergist did not find the data in favor of allergological pathology, the gynecologist - diseases of female genital organs.

The psychiatrist suggested somatogen n on-conditioned asthenic syndrome.

The patient is consulted by a rheumatologist, prof. IV Mukhin, who did not find convincing evidence in favor of rheumatological pathology and could not explain the causes of progressive weight loss. The consultant recommended that the therapy should be supplemented with retabolil, the introduction of albumin and fat emulsions.

Based on the history of the disease, life, objective examination, the results of laboratory-instrumental research, consultations of related specialists formulated the following alleged clinical diagnosis:

The main diagnosis. Chronic enteritis in the acute stage in combination with the syndrome of excessive bacterial growth. Condition after subtotal resection of the large intestine with the imposition of ileosigmoanastomosis (2012) on chronic colonic stasis. Non-alcoholic fatty liver disease, liver steatosis, induced by progressive weight loss. ZHB, state after cholecystectomy (2013). Chronic gastroduodenitis, non-associated with *Helicobacter pylori,* stage of unstable remission. Chronic pancreatitis in the stage of blurred exacerbation.

Concomitant diagnosis: Somatogen-induced asthenic syndrome. IHD, atherosclerotic cardiosclerosis, grade 1 heart failure with preserved systolic and initial diastolic left ventricular dysfunction, NYHA functional class III. Hypertensive disease of the 1st stage (crises according to medical records), risk 3. Dysmetabolic cardiomyopathy, Hydropericardium. Discirculatory encephalopathy of the 2nd degree with cephalgia, diffuse neurologic symptoms, pronounced astheno-neurotic syndrome in the stage of decompensation. Subatrophy of the thyroid gland, euthyroidism. Bilateral bulbar lung emphysema, pulmonary insufficiency, 1 st degree. Myopia of medium degree in both eyes.

Differential diagnosis

Despite the presence of a variety of somatic pathology, surgical interventions, the exposed presumptive diagnosis did not explain the progressive loss of body weight. Therefore, all of the above data were repeatedly analyzed, a literary search was conducted in various scientific databases.

Our reasoning proceeded in the following direction. The BMI values at the time of the last hospitalization were 15.82 $kg/m^{2,}$ which should be regarded not simply as weight loss, but as cachexia. The updated definition of cachexia was approved at a monothematic consensus held in Washington in 2008 (Table 1).

Table 1

The definition of cachexia by W. Evans et al. (2008 [5])

Cachexia is a complex metabolic syndrome associated with the underlying disease and is characterized by loss of muscle tissue with/without loss of adipose tissue. The main clinical feature of cachexia in adults is weight loss (adjusted for fluid retention).

Cachexia can be caused by exogenous and endogenous factors (Table 2).

Table 2

The causes of cachexia (according to P. Kravchun et al., 2015 [2])

Exogenous factors
Malnutrition in quantitative and qualitative terms (involuntary or deliberate complete or partial fasting, deficiency diseases - beriberi, pellagra, sprue, rickets).
Low caloric content of food (vegetarianism, fasting).
Long-term overloads (physical and emotional, including physical exertion in conditions of prolonged overheating).
Prolonged psychoemotional stress (loss of appetite as a result of frequent and prolonged psychotraumatic situations).
Radiation cachexia, which develops in chronic stages of radiation sickness.
Unhealthy lifestyle, smoking, drinking and alcoholism, drug addiction.
Endogenous factors
Acute and chronic infectious and parasitic diseases: intestinal infections, tuberculosis (especially in mesenteric lymph nodes), syphilis, chronic malaria, amebiasis, helminthiases, HIV infection, as well as sepsis, chronic purulent processes (osteomyelitis, abscesses, bronchiectatic disease, pleural empyema).
Malignant neoplasms: cancer of the esophagus, stomach, pancreas, liver and other localizations.
Diseases of the blood: acute and chronic leukemia, paraproteinemic hemoblastoses (myeloma, Waldenstrom ‘s macroglobulinemia, heavy chain disease), nonleukemic hemoblastoses (lymphocytoma, lymphosarcoma, lymphogranulomatosis).
Pathology of the gastrointestinal tract: spasm and strictures of the esophagus, esophagitis, stenosis of the pylorus of various etiologies, malabsorption syndrome, gastroenteritis, chronic enterocolitis, chronic hepatitis, cirrhosis, chronic pancreatitis, Crohn’s disease, ulcerative colitis, Whipple ‘s disease, celiac disease, condition after resection of the stomach and intestine.
Amyloidosis, sarcoidosis of internal organs.
Diseases of the endocrine glands: Shihan syndrome (postpartum hypopituitarism), Simmonds’ pituitary cachexia, the thyrotoxic goiter, myekside cachexia, adrenal insufficiency (Addison’s disease), uncompensated insulin-dependent diabetes mellitus, neuroendocrine pluri-glandular lesions.
Psychogenic factors: primary anorexia nervosa and secondary (symptomatic) anorexia, as a manifestation of psychosis, schizophrenia, endogenous depression, hysteria, neurasthenia and other diseases.
Traumatic and burn disease in general chronic progressive flow (traumatic and burns exhaustion).
Terminal stages of chronic circulatory failure, chronic kidney disease and severe chronic pulmonary heart failure.
Systemic diseases of connective tissue: systemic lupus erythematosus, systemic scleroderma, dermatomyositis, nodular periarteritis
Wound cachexia with prolonged suppuration of wounds of soft tissues and bones (resorption of products of tissue decay and protein loss).
Comatose conditions or severe operations, after which it is difficult to maintain body weight due

to the inability to eat normally.
Reception of medications: psychostimulants, thyroid hormones, laxatives, drugs for chemotherapy of cancer.

When analyzing the likely exogenous causes of cachexia, all possible variants were quickly discarded, whereas for the elimination of endogenous variants, much more time was needed.

Negative analyzes of stool for eggs of worms, HIV, absence of antibodies in blood to the most common helminths, parasites, HIV, RW allowed to exclude acute and chronic forms of helminthiases, parasitosis, HIV infection, syphilis. Intestinal form of tuberculosis is excluded due to the absence of typical radiographic changes in the lungs, granulomas in the large intestine, symptoms of intoxication, leukocytes and erythrocytes in the clinical analysis of feces. The results of instrumental research methods have made it possible to eliminate bronchiectasis, abscesses of the lungs and other organs, empyema of the pleura.

Malignant diseases of various localizations (including infiltrative form of gastrointestinal cancer) are excluded on the basis of data from laboratory and instrumental studies, as well as consultations of related specialists.

Data from X-ray, endoscopic studies did not reveal significant pathology of the esophagus, stomach, pylorus, liver, pancreas, which could lead to cachexia. Negative results of studies of antibodies to gliadin, tissue transglutaminase made it possible to exclude celiac disease. Suspected disease Whipple (lymphadenopathy, free fluid in the pericardium, some neurological symptoms) is excluded in connection with the absence of fever, arthritis, creatorrhea, steatorrhea, bronchitis, pleurisy, negative results of histological examination of duodenal biopsy, lack of DNA *Tropheryma whippelii* according to PCR-study. Inflammatory bowel disease, which could be assumed on the basis of the initial formation of the rectal fistula, the violation of bowel movement, the formation of intestinal obstruction, are eliminated from the list of possible causes on the basis of the absence of signs of anemia, malabsorption and maldigestia, fever, characteristic extraintestinal manifestations, as well as data of instrumental methods research and results of pathohistological conclusion.

Various endocrinological causes of cachexia are excluded. There were no clinical signs of thyrotoxicosis (sweating, exophthalmos, tremor, enlargement of the thyroid gland, tachycardia, etc.), hypopituitarism and Addison's disease (hypothyroidism, hypothermia, bradycardia, diabetes insipidus, hypotension, axillary hair loss, hyponatremia, hypochloraemia,). Diagnosis of diabetes mellitus was made on the basis of normative values of glycemia, glycosylated hemoglobin on the background of the lack of taking hypoglycemic drugs and compliance with specific dietary recommendations.

There were also traumatic and burn diseases, renal, hepatic, heart failure; systemic diseases of connective tissue are excluded; the patient was not in a coma and denied the use of psychostimulants, thyroid hormones, laxatives (except for enemas with tannin).

Special difficulties caused the need to exclude amyloidosis. Diarrhea, minor hepatomegaly, safety of liver functional activity, pericarditis, diastolic myocardial dysfunction testified in favor of this pathology. However, the absence of thickening of the interventricular septum and/or the posterior wall of the left ventricle, cholestasis, orthostatic hypotension, diffuse interstitial formations in the lungs, macroglossia, and renal damage made it possible to exclude this pathology indirectly. Of course, completely refute or confirm this pathology is possible only on the basis of a morphological study of the biopsy of the affected organ (in this case - thin, large intestine), but the patient categorically refused to conduct repeated biopsies.

Thus, we had to consider the probability of the patient having anorexia nervosa. The assumption, seemingly unlikely, turned out to be completely justified. After further clarification of the anamnesis, it is established that for the last three years the patient is in a second marriage, and the husband of the patient is younger than his wife for 9 years. The behavior of the patient in the presence of her husband changed significantly, the patient began to show her feelings and

suffering brightly. In order to exclude this pathology, the patient was repeatedly consulted by a psychiatrist of a specialized institution. Below is the text of the advisory opinion:

Complaints about increased fatigue, anxiety for one's health, and situational decline in mood. Consciousness is not dark, the appearance is neat. Mimicry is adequate to experiences. Out- of-the -way and allopsychic orientation is preserved. In the conversation he enters willingly. The speech is somewhat slow in pace, the voice is quiet, the pronunciation is clear. Vocabulary is rich enough. The conversation is detailed, fixed on their feelings and experiences. He assesses his condition as serious, very worried about the changes taking place with it. In conversation is exhausted, slightly inhibited in the psychomotor sphere. Mood background reduced. Emotionally unstable, the ability to switch emotions is preserved. Emotions are adequate to the situation. Affective changes are asthenic. Physiological instincts are preserved. Motivation is reduced. Intellectual level corresponds to the received education and life experience. Deceptions of perception are not revealed. In the field of sensations, there are senestopathic manifestations. The amount of attention is sufficient, the ability to switch attention is preserved. Conclusion: Anxiety-depressive reaction caused by an adaptation disorder (F 41.2).

After consulting a psychiatrist with the patient, an additional conversation was held, during which it was found that the patient deliberately limited herself in eating, so as not to gain excess weight and be extremely attractive to her husband. Thus, the patient had anorexia nervosa, which explained the presence of many clinical manifestations.

Final diagnosis and tactics of patient management

In connection with the emergence of new data, the final diagnosis is transformed as follows:

The main diagnosis. Anxiety-depressive reaction caused by an adaptation disorder (F 41.2). Anorexia nervosa, limiting form, severe course. Chronic enteritis in the acute stage in combination with the syndrome of excessive bacterial growth. Condition after subtotal resection of the large intestine with the imposition of ileosigmoanastomosis (2012) on chronic colonic stasis. Non-alcoholic fatty liver disease, liver steatosis, induced by progressive weight loss. ZHB, state after cholecystectomy (2013). Chronic gastroduodenitis, non-associated with *Helicobacter pylori*, the stage of unstable remission. Chronic pancreatitis in the stage of blurred exacerbation.

Concomitant diagnosis: IHD, atherosclerotic cardiosclerosis, grade I heart failure with preserved systolic and initial diastolic left ventricular dysfunction, NYHA functional class III. Hypertensive disease of the 1st stage (crises according to medical records), risk 3. Dysmetabolic cardiomyopathy. Discirculatory encephalopathy of the 2nd degree with cephalgia, diffuse neurologic symptoms, pronounced astheno-neurotic syndrome in the stage of decompensation. Subatrophy of the thyroid gland, euthyroidism. Bilateral bulbar lung emphysema, pulmonary insufficiency, 1 st degree. Myopia of medium degree in both eyes.

The patient was transferred to the psychoneurological dispensary for correction of the revealed disorders. With recommended to normalize gastrointestinal functioning nutritional therapy, receiving ditsetela, enterozhermin s, Latium well.

Literature review

Modern diagnostic criteria for anorexia nervosa are given in the fifth edition of the Diagnostic and Statistical Manual of Mental Illness (Diagnostic and Statistical Manual of Mental Disorders, DSM-5), which indicates that the change is, feeding behavior characterized by a decrease in body weight, guilt and impaired mental equilibrium (Table. 3). It is noteworthy that in the updated DSM-5 criteria does not indicate the degree of weight loss needed to confirm the diagnosis, and the presence of amenorrhea is not expected earlier is an essential component of the diagnosis.

Table 3

The diagnostic criteria for DSM-5 nervous anorexia, [3]
A. Limiting the consumption of calories relative to physiological needs, leading to a significant reduction in body weight, taking into account age, gender, developmental lag and physical disabilities. A significant decrease in body weight in adults is defined as a mass less than the minimum normal, in children and adolescents - less than the minimum expected.
B. Expressed fear of weight gain or obesity, or the presence of behavioral habits that prevent the increase in mass, even with its significant decrease.
C. Disturbance of the feeling of one's own weight or body shape, caused by the influence of mass or body size on self-esteem.
Coding
According to the *ICD-9-CM* code nervous anorexia - **307.1,** regardless of its type. In accordance with *ICD-10-CM* code depends on the type of nervous anorexia. ***F50.01 - restrictive (limiting)*** for the last 3 months, patients reported recurrent episodes of binge eating and did not resort to the clearance procedures (self-induced vomiting, misuse of laxatives, diuretics, enemas). This subtype describes clinical cases in which weight loss is predominantly associated with diet, starvation and/or excessive physical exertion. ***F50.02 - Cleansing:*** Over the past 3 months, the patient has reported recurrent episodes of compulsive overeating or resorted to purification techniques (self-induced vomiting or abuse of laxatives, diuretics, enemas).
Refinement
Partial remission: after detecting all the above criteria of anorexia nervosa, the absence of criterion A (low body weight) for a long time, but criterion B (pronounced fear of weight gain or obesity or behavioral habits that prevent weight gain) or C (violation of self-perception of body weight and its size) are preserved. ***Complete remission:*** After finding all of the above criteria nervous anorexia, for a long time, none of these criteria is not saved.
It is necessary to clarify the severity of the disease at present
The definition of the minimum level of severity of the disease in adults is based on the calculation of BMI, in children and adolescents - on the definition of the BMI centile. The degree of severity can be increased in order to adequately reflect clinical symptoms, the degree of functional disability, the need for custody. ***Lightweight:*** BMI≥17 kg/m^2 ***Moderate:*** BMI - 16-16,99 kg/m^2 ***Heavy:*** BMI 15-15.99 kg/m^2 ***Extreme:*** BMI <15 kg/m^2
Note: ICD-10-CM is an international classification of diseases of the 10th revision, clinical modification.

Etiology

The etiology of eating disorders at the present time remains unclear, therefore the possible influence of various factors is considered. The impact of the environment involves the social idealization of a certain body weight and its size. Another leading cause of eating disorders is the style and characteristics of parenting, home stresses and conflicts between parents. In recent years, increasing the amount of data that reveal the role of biological factors in the development of the nervous anorexia. Changes in eating behavior is often associated with disruption of the system of neurotransmitters, including - serotonin and dopamine; the role of other hormones (ghrelin, leptin, oxytocin) in the development of anorexia nervosa is examined. Currently identify several risk factors for nervous anorexia (tab. 4).

Table 4

Risk factors for the development of anorexia nervosa (according to M. Dubrovskaya et al., 2016 [1])

Risk Factor	Explanation
Genetic	The existing genetic predisposition to a certain type of personality, to a mental (affective or anxious) disorder or to a dysfunction of neurotransmitter systems
Biological	The presence of overweight and early menarche, as well as violation of the interaction of neurotransmitters, regulating feeding behavior (serotonin, dopamine, norepinephrine).
Family	Presence of relatives of pathological drives: bulimia, anorexia, pararexia, pathology of the instinct of self-preservation (suicidal thoughts and deeds, depression, self-torture, self-mutilation, vagrancy), drug addiction syndromes, including alcoholism, kleptomania, pyromania.
Personal	Characterized perfectionist, obsessive (obsession) type of personality, combined with low self-esteem, body image instability, feeling of inferiority, insecurity and mismatch requirements of families and society
Cultural	Living in an industrially developed country and emphasizing slenderness (leanness) as the main sign of feminine beauty, as well as the presence of stress factors
Age	Adolescent and adolescent age is traditionally regarded as a risk factor for anorexia

In the dynamics of the development of anorexia nervosa, several periods are distinguished:

- ***initial*** (dissatisfaction with one's own appearance is formed, but attempts to reduce body weight have not yet been undertaken);
- ***anorectic*** (active measures to reduce body weight);
- ***cachectic*** (weight loss reaches a critical level, secondary somatic and endocrine disorders occur with secondary pangipopituitarism);
- ***reduction of anorexia*** (in case of successful treatment).

In our opinion, the initial trigger mechanism in the initial stage can also be the emergence of an individual's attitude toward the formation of an indulgent attitude towards their wishes, sympathy and concern among others, especially close people. This mechanism also could not be excluded in the above clinical observation.

Clinical picture

Clinical manifestations nervous anorexia extremely diverse (Table. 5). As a rule, they are divided into three large groups: eating disorders, physiological manifestations and mental changes.

Undoubtedly, the emergence of anorexia nervosa is due to the presence of an obsessive desire to lose weight, sometimes it acquires the character of mania, although objectively there may be a deficit in body weight or its full compliance with regulatory indicators. Patients with anorexia nervosa often skip meals, limit their diet to vegetables, fruits, and dietary products. They introduce special food rituals, such as cutting food into small pieces, careful serving, long chewing. Patients often wear baggy clothes, put on extra clothes, wear things that do not match their size, trying to hide imaginary obesity.

Table 5

Some clinical signs nervous anorexia (by B. Harrington et al., 2015 [6])

Symptoms	Possible pathophysiology
Amenorrhea	Dysfunction of the hypothalamus, decrease in salt reserves, malnutrition

Arrhythmia	Electrolyte disorders, heart failure, QT interval prolongation
Bradycardia	The weakness of the heart muscle associated with arrhythmia and sudden death
Hyperokeratosis	Malnutrition, deficiency of vitamins and minerals
Hypotension	Malnutrition, degradation
Hypothermia	Dysfunction of thermoregulation, hypoglycemia, fatigue depletion
Significant weight loss	Starvation, reduced caloric intake
Osteoporosis	Malnutrition

Despite the fact that anorexia nervosa is often associated with some cognitive deficits, many patients retain cognitive functions at a sufficient level. Patients with eating disorders often support excessive physical activity, despite weather, malaise or trauma. Patients avoid society, seek solitude, but easily converge with other victims of imaginary excess weight, there is a looping on their own problems associated with "excess weight" and the emergence of dysmorphomania - discontent with their weight, appearance, behavior, success in losing weight.

In addition to eating and general eating disorders, mental disorders, physiological symptoms of anorexia arise: significant weight loss, weakness, lethargy, fatigue, low blood pressure, low temperature. As a consequence, there is a disruption in the functioning of the digestive tract (gastroenterocolitis, meteorism, constipation), cardiac arrhythmias (bradycardia, arrhythmia, hypotension) and hypovitaminosis (dry scaly skin, dull brittle hair, nail lameness), circulatory insufficiency, edema of upper and lower extremities. Characteristic of the lanugo symptom is a significant increase in gun hair on the arms, legs, trunk, as well as rapid tooth decay, omission of the internal organs, menstrual cycle disorders, muscle atrophy, degeneration of internal organs with the appearance of multi-organ failure, decreased or absent libido.

Anorexia nervosa is associated with an increased risk of suicide. Other characteristic psychiatric pathologies are obsessive-compulsive disorder, obsessive-compulsive personality disorder, social phobia, anxiety disorders, personality disorders. Psychological symptoms include excessive emotional excitability, reduced tolerance for stress, emotional dysregulation, social self-isolation, and features of perfectionism.

Diagnostics

The diagnosis of anorexia nervosa is currently the diagnosis of an exception. Before confirming this pathology, it is necessary to conduct a comprehensive search for various neoplasms (stomach cancer, colon, body and tail of the pancreas may appear for months only by losing weight and a little weakness), endocrine and other diseases that last up to a certain time with erased symptoms (thyrotoxic goiter, diabetes, the initial stages of diencephalic-pituitary dystrophy, chronic adrenal insufficiency, etc.). After the exclusion of oncological and other organic diseases, the psychogenic nature of weight loss can be established. If confirmed diagnosis of anorexia nervosa one of the first steps to be taken when examining a patient with anorexia nervosa is to decide whether to be hospitalized to stabilize the patient’s condition. Experts of the American Association of Pediatricians have developed special criteria for hospitalization of such patients (Table 6).

Table 6

Criteria for the American Academy of Pediatrics for the hospitalization of patients with anorexia nervosa (according to C. Campbell et al., 2014 [4])

- Heart rate <50 beats/minute during the day, at night - <45 beats/min
- Systolic blood pressure is <90 mm Hg. Art.
- Orthostatic changes in the pulse (> 20 bpm) or blood pressure (> 10 mm Hg)
- Arrhythmia
- Temperature <96 ^{0}F
- <75% of ideal body weight or continued weight loss, despite therapy
- The volume of adipose tissue <10%
- Refusal to eat
- Ineffectiveness of therapy conducted at an outpatient stage

For suspected nervous anorexia recommended to investigate refinement urinalysis for water exchange state, the level of pH, the presence of ketones, kidney damage. Anthropometric parameters should be monitored: height, weight, BMI, as well as body temperature and blood pressure.

Treatment

In connection with the diverse etiopathogenetic causes of cachexia, treatment should first of all be aimed at eliminating the main cause. The second main principle of therapy should be recognized as adequate nutrition, contributing to the elimination of metabolic disorders.

Treatment should be individualized based on the degree of severity, the features of the course of the disease, the concomitant psychiatric pathology, the availability of psychological support, the participation of family members, patient motivation, regional availability of specialized programs, medical stability.

Currently, the effectiveness of a variety of drug therapy for anorexia nervosa continues to be studied. Antidepressants, including selective serotonin reuptake inhibitors (SSRIs), can help overcome the symptoms of depression and suicidal thoughts in patients with anorexia nervosa. However, they could not prove their effectiveness in the treatment of anorexia nervosa during clinical trials.

Forecast

Despite the fact that more than half of patients with nervous anorexia recover only 30% of patients achieved a partial improvement, and 20% of patients remain chronically ill. It is anorexia nervosa that is the only psychiatric illness with a very high mortality rate: a standardized death rate from all causes ranges from 1.7 to 5.9.

Currently, the patient continues to be observed at the psychiatrist, feels relatively satisfactory, but there is no significant increase in BMI.

In conclusion, we give the basic data on anorexia nervosa, which are presented in this article (Table 7).

Table 7

Key provisions
During the initial examination of patients with anorexia nervosa, the stability of the patient's condition and the need for hospitalization should be assessed
Patients with eating disorders should be examined for psychiatric illness, including depression, risk of suicide, anxiety disorder

For successful treatment of anorexia nervosa, a multidisciplinary team of specialists is needed, including a family doctor, psychotherapist or psychiatrist, nutritionist, an expert in the correction of eating disorders.
The minimal goal in weight restoration in patients with anorexia nervosa is to increase the mass by 90%, depending on the mean values of the calculated body weight, taking into account the patient's age, height, sex.
Antipsychotic drugs, as a rule, are not effective in the treatment of eating disorders.

References:

1. Нервная анорексия в практике педиатра / М. И. Дубровская, Н. В. Давиденко, Т. В. Зубова [и др.] // Лечащий врач. — 2016. — №1. — Режим доступа: https://www.lvrach.ru/2016/01/15436378/
2. Кравчун П. Г. Потеря массы тела и кахексия / П. Г. Кравчун // Газета «Новости медицины и фармации». — 2015. — №6 (535). — С. 22–27.
3. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. — 5th ed. — Washington, DC : American Psychiatric Association, 2013.
4. Campbell K. Eating disorders in children and adolescents: state of the art review / K. Campbell, R. Peebles // Pediatrics. — 2014. — Vol. 134, No 3. — P. 582–592.
5. Evans W. Cachexia: a new definition / W. Evans // Clinical Nutrition. — 2008. ─ Vol. 27, No 6. — P. 793–799.
6. Harrington B. Initial evaluation, diagnosis, and treatment of anorexia nervosa and bulimia nervosa / B. Harrington // Am. Fam. Physician. — 2015. — Vol. 91, No 1. — P. 46–52.

Clinical observation of thinning of psychogenic genesis after colectomy

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Key words: psychogenic anorexia, clinical picture, diagnostics, treatment, prognosis

The article presents differential-diagnostic approaches based on the example of clinical observation of severe thinning, clinical features, diagnostics, treatment and prognosis for anorexia nervosa.