Chronic pancreatitis: some modern provisions indicated in classifications of the last years

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There is a sufficient number of clinical classifications of chronic pancreatitis (CP), but due to the complexity and variety of clinical picture and diagnostic capabilities in practical medicine. they are not used in full [4]. Analyzing numerous classifications (more than 40), it is possible to distinguish clinical classifications, drawn up taking into account the nature of the pain syndrome; morphological classifications taking into account the localization and character of morphological changes in the pathological process; etiologic and pathogenetic; classifications using mixed construction principles; international disease classifications.

In the *international classification of diseases and causes of death (ICD-10)* distinguish the following headings:

1. Chronic alcoholic pancreatitis (code K86.0).

2. Other types of pancreatitis (code K86.1) (infectious CP, chronic recurrent, hereditary, idiopathic, autoimmune).

- 3. Pancreatic cysts (PJ) (K86.2).
- 4. Pancreatic pseudocysts (K86.3).

5. Other proven diseases of the pancreas (K86.8) — atrophy, lithiasis, fibrosis, cirrhosis, pancreatic infantilism, necrosis (fat, aseptic). At the same time the cystic and fibrous illness (E.B.) is excluded; nizioblastoma (D13.7); pancreatic steatorrhea (K 90.3).

6. Pancreatic steatorrhea (K90.1).

In the International Classification of Diseases and Causes of Death (ICD-11), the following headings for pancreatic diseases are distinguished:

DC50 Cystic diseases of the pancreas

DC50.0 Cyst of the pancreas

Excluded — congenital cyst of the pancreas (LB21)

DC50.1 Pancreatic pseudocyst

DC50.Y Other specific cystic diseases

DC50.Z Cystic diseases of the pancreas, unspecified

DC51 Acute pancreatitis

Definition. Inflammation of the pancreaas with acute onset. In mild cases recovery without complications; severe cases are associated with high mortality due to systemic complications, regardless of the intensive therapy being conducted.

Excluded

Cytomegalovirus pancreatitis

Pancreatitis due to mumps

DC51.1 Acute idiopathic pancreatitis

Definition. Acute pancreatitis, the etiology of which cannot be determined. The diagnosis is established after the exclusion of alcoholic, gallstone and other possible etiologies.

DC51.2 Acute alcohol-induced pancreatitis

Definition. Acute pancreatitis associated with alcohol. Although alcohol is the main cause of this disease, the diagnosis should be made after excluding other etiological factors.

DC51.3 Acute biliary pancreatitis

Definition. Acute pancreatitis associated with gallstones. It is diagnosed after exclusion of other etiological factors. The probable cause is considered bile reflux to the pancreatic duct due to stone obstruction of the duodenal papilla.

DC51.3 Acute drug-induced pancreatitis

Definition. Acute pancreatitis caused by appointment drug treatment. Acute pancreatitis can cause some diuretics, antibiotics, estrogen containing contraceptives, azathioprine, etc.

DC51.4 Hereditary acute pancreatitis

Definition. Recurrent acute inflammation of the pancreas, characterized by episodes of intense abdominal pain. Genetic mutations are associated with such pancreatitis. The onset of the disease is characteristic of persons under 20, however, it occurs at any age.

DC51.5 Exacerbation of CP

DC51.Y Another certain acute pancreatitis

DC51.Z Acute pancreatitis, unspecified

DC52 CP

Excluded

Cystic fibrosis

Pancreatic Steatorrhea

DC52.1 Calcific pancreatitis

Definition. Inflammation of the pancreas, requiring immediate medical intervention and hospitalization during an attack, and in which calcium salts are deposited in the soft tissues, causing hardening.

DC52.2 Paraduodenal pancreatitis

Definition. Inflammation in the space between the pancreas head (medially) and the descending part of the duodenum (lateral). Chronic inflammatory process in the subcranialthe head of the pancreas, where the excretory ducts of the pancreas and the choledochus in the duct wall of the duodenum intersect.

DC52.3 Hereditary CP

Definition. Rare form of CP with the beginning in childhood. With the exclusion of an earlier onset and slow clinical course, morphological signs and laboratory data does not differ from alcoholic CP.

DC52.4 Chronic alcohol-induced pancreatitis

DC52.5 Chronic idiopathic pancreatitis

Definition. Inflammation of the pancreas, characterized by recurrent or persistent abdominal pain unrelated to known risk factors.

DC52.6 Tropical pancreatitis

Definition. A rare disease with onset in childhood or adolescence, which occurs mainly in tropical countries, developing and characterized by abdominal pain, steatorrhea andfibrocalculosis pancreatopathy on the background of chronic non-alcoholic pancreatitis. Primitive CP is more often combined with calculus or cancer of the pancreas.

DC52.Y Another certain CP

DC52 CP unspecified

DC53 Autoimmune pancreatitis

Definition. A rare disease characterized by chronic non-alcoholic pancreatitis, manifested by abdominal pain, steatorrhea and obstructive jaundice, can be treated with corticosteroids. There are two types of autoimmune pancreatitis. The first type is observed in older men and is associated with damage to other organs and an increase in the level of immunoglobulin. G4 (IgG4). The other type is diagnosed with the same frequency in men and women, manifests at an earlier age and is not combined with damage to other organs or an increase in the level of immunoglobulin. G4 (IgG4).

DC54 Obstructive pancreatitis

Definition. Obstruction in an inflamed prostate, requiring immediate medical intervention and hospitalization during an attack. It has many causes and symptoms, manifested in the case when pancreatic enzymes (trypsin) are assigned to digest food, but are activated in the pancreas instead of the lumen of the small intestine.

DC55 Somee specific disease

DC55.0 Atrophy of the pancreas

DC55.1 Secondary pancreatic insufficiency

DC55.2 Pancreatic steatorrhea

DC55.Z Some specific pancreatic diseases

DC5Y Other specific diseases of the pancreas

DC5Z Diseases of the pancreas, unspecified

Standards developed in Ukraine diagnosis and treatment include European and world recommendations regarding the use of classifications. The Marseille-Roman classification with the clarifications by Ya.S. Zimmerman and N. B. Gubergrits is used more often in clinical practice (2002) [13].

According to this classification, etiological factors distinguish primary and secondary CP. Due to the peculiarities of morphological changes, the disease is verified ascalcifying, obstructive, inflammatory, indurative (fibro-sclerosing), hyperenzyme CP. The following clinical variants are distinguished: continuously recurrent, painful, pseudotumorous, latent (painless) and combined with other diseases. In the last 10–15 years, Ukraine has conducted a series of studies aimed at studying the role other diseases of internal organs in the mechanisms of development of comorbidity/multimorbidity of CP. So, the pathogenetic moments of the progression of the disease when it is combined with coronary heart disease [2, 3, 14] are studied, COPD [8], obesity [12], diabetes mellitus [6, 9], metabolic syndrome [1, 10] and gastroenterological diseases [11].

In the presented classification, periods of exacerbation and remission, the nature of functional disorders (distinguished CP with a violation of the pancreatic exocrine function, as well as CP with endocrine function impairment (hyperinsulinism, insular apparatus hypofunction)) are highlighted. A classification of severity (mild, moderate, severe) is given. Complications include bleeding, shock, pleuropulmonary disorders, acute renal and hepatic failure, pancreatogenic encephalopathy, hepatitis and nephritis, cardiomyopathy, dynamic intestinal obstruction, liver abscess, obstructive jaundice, hypocalcemia, DIC, diabetic coma. Complications that require mandatory joint observation with the surgeon include cysts, pseudocysts, ascites, stricture of pancreatic ducts and/or common bile duct, duodenal stenosis, cancer of the pancreas.

It should be noted that clinicians are positive about the one proposed in 2007. classification of M-ANNHEIM (2007), since it fully covers the clinical course of CP in terms of etiological and pathogenetic mechanisms. The name of the classification is deciphered as follows: M — multifactorial, A — alcohol, N — nicotine, N — nutrition, H — heredity; E — factors efferent affecting the diameter of pancreatic duct and secret secretion, I — immunological factors, M — miscellaneous metabolic factors.

Main feature of the diagnostic criteria for alcoholic pancreatitis in the proposed classification is the inclusion of patients according to the dose of alcohol consumption. A gradation of moderate intake has been introduced, since long-term intake of small and medium doses are also risk factors for CP.

The classification of M-ANNHEIM is as close as possible to the clinic, takes into account the etiology, the stage of CP, the state of the pancreatic intrasecretory and exocrine function, the severity of the course, complications, characterized by simplicity and can be used as a tool for solving both therapeutic and surgical tasks.

In this classification, the role of hereditary factors contributing to the development of hereditary, tropical and familial as well as idiopathic pancreatitis with early and late manifestations. Factors affecting the diameter of the pancreatic ducts and secretion are considered pancreasdivisum; annular pancreas and other abnormalities; blockage of the pancreatic ducts (for example, a tumor); posttraumatic cicatricial stenosis of the pancreatic ducts; dysfunction of the sphincter of Oddi. It is emphasized that immunological factors cause autoimmune pancreatitis, pancreatitis associated with the syndrome Sjogren associated with inflammatory diseases (for example, primary biliary cirrhosis). Various metabolic factors may contribute to the development of CP, including drug and toxic (hypercalcemia, hyperparathyroidism, chronic renal failure, drugs and toxic drugs). This is very important for preventive measures.

Depending on the symptoms, the clinical stages of CP are represented by an asymptomatic phase and CP with a clinical manifestation. Asymptomatic phase is represented by subclinical CP, which proceeds with a period without symptoms (it is diagnosed by chance at autopsy, surgery) and is denoted by the letter "a".

Acute pancreatitis, when the first episode may be the beginning of CP, is indicated by the letter "b".

Acute pancreatitis with severe complications is indicated by the letter "c".

It should be noted that patients with the first episode of acute pancreatitis (in the absence of CP), but with risk factors (alcohol history) are related to the "0a" stage, and in the absence of morphological and functional changes from the PP, to "0b". If there is a corresponding symptomatology (for example, calcification of the pancreas), then such patients are referred to the "Ia" stage.

The diagnosis of CP with a clinical manifestation is set with clinical manifestations. At the same time certain stages are distinguished.

Stage I is characterized by abdominal pain without pancreatic insufficiency: a) relapse of acute pancreatitis (between episodes acute pancreatitis pain is absent); b) recurrent or persistent pain (including between episodes of acute pancreatitis); c) I a/b characterizes the course of CP with severe complications.

Stage II is characterized by pancreatic pancreatitis and endocrine insufficiency: a) isolated exocrine (or intrasecretory) pancreatic insufficiency (without pain); b) — isolated exocrine (or endocrine) pancreatic insufficiency (with pain syndrome); c) II a/b — stage with severe complications. Consequently, the second stage is characterized by both endo- and exocrine insufficiency with and without abdominal pain. As a rule, symptoms of exocrine pancreatic insufficiency develop first. The manifestation of functional deficiency with symptoms of diabetes is rare (sometimes with alcoholic and tropical pancreatitis).

Step III describes Xia specimens o- and endocrine pancreatic insufficiency in SRI with abdominal pain: a) exocrine and endocrine insufficiency of the gland (with pain requiring treatment with analgesics; b) stage with severe complications.

Stage IV is characterized by changes in the intensity of pain syndrome (stage of "burnout" of the pancreas): a) exocrine and endocrine insufficiency of the gland in the absence of pain without serious complications; b) exocrine and endocrine insufficiency of the gland in the absence of pain, but with severe complications. At this stage, abdominal pain may disappear completely or significantly decrease (more often after 10 years). It is believed that this clinic is due to fibrosis and the development of functional insufficiency. In addition, the cause may be the destruction of the nervous elements of the tissues of the organ.

An important point can be considered the inclusion in the classification of "certain" and "possible" pancreatitis (diagnostic criteria were developed in 1997 in Zurich). Calcification of the pancreas, moderate or severe changes of the pancreatic ducts of the gland are referred to as "definite" pancreatitis (according to the Cambridge classification); significantly pronounced exocrine insufficiency of the pancreas (for example, steatorrhea, significantly diminished during treatment with enzyme preparations); typical for CP histological pattern.

The diagnosis of "possible" pancreatitis allows the presence of one or more of the following criteria: slight changes in the structure of the ducts; pseudocyst (s) — permanent or recurrent; pathological results of functional tests (fecal elastase-1 indicators, secretin test, secretin-pancreasimine test); endocrine deficiency (for example, pathological results of glucose tolerance test).

In this classification introduced the category of "borderline" CP. This is CP, which proceeds with typical symptoms, but in the absence of criteria of "possible" and "definite". It is diagnosed with the development of the first episode of acute

pancreatitis in the presence or absence of the following factors: a family history indicating the disease of the pancreas in the family and in the immediate family; the presence of risk factors specified in the classification of M-ANNHEIM. Patients in this category should be carefully examined and observed in order to timely detect early symptoms of the disease, using endoscopic echography.

According to the classification of M-ANNHEIM, a ball assessment of the features of the course of CP, its severity is introduced. Ballroom score was developed following the example of that in Crohn's disease and certain liver diseases. It helps to determine the tactics of treatment and evaluate the prognosis. After completing the estimated M-ANNHEIM point system, the balls are summed up. The sum of points is indices. Thus, the gradation of pancreatic pain is carried out according to the sum of balls and according to the need for the use of narcotic analgesics. For example, if 2 points are set, then narcotic analgesics should be administered (narcotic drugs are used more widely abroad). If at the same time, periodic pancreatic attacks of acute pancreatitis are recorded, then 3 points are given. Thus, in sum, the severity of abdominal pain syndrome is estimated at 5 points.

It is important that the calculation of the severity index of worn surgical vmesha ments n and RV and all serious complications, I'm starting with the first wedge and iCal displays up to all anamnestic period. If n atsienta was 2 and Bo Lee severe of complications, then each of them separately and must be included in the calculation of the severity index.

Since tests assessing the pancreatic exocrine function are not sensitive enough to detect mild and moderate exocrine insufficiency, periodic indulgence in combination with the pancreatic nature of the exercises (even with normal test scores) is treated as secretory insufficiency and is evaluated by 1 point. It is proved that endocrine insufficiency should be evaluated by 2 points.

Such severe complications as ascites, bleeding, pseudoaneurysm, duodenal stenosis, choledochus stenosis of varying degrees, pancreatic fistula are estimated at 1 and 2 points, since they are reversible.

Complications that indicate the irreversibility of morphological changes in the pancreas (thrombosis of the portal, splenic veins with portal hypertension or without it, cancer of the pancreas) are estimated at 4 points.

Estimated point system M-ANNHEIM (for assessing the severity of CP)

Features of CP		Score, points
Pain		
With no treatment, there is no pain	There is no need for prescribing pain medications	0
Recurrent acute pancreatitis	There is no pain between episodes of acute pancreatitis	1

Pain disappears when	When taking analgesics and / or carrying out	2
prescribing drugs	endoscopic treatment, pain disappears	
Intermittent pain	There are periods when the pain is absent,	3
	regardless of the presence or absence of	
	drug treatment; episodes of acute	
	pancreatitis are possible	
Constant pain	Patients constantly complain of pain,	4
	regardless of the treatment; episodes of	
	acute pancreatitis are possible	
Pain cintrol		
No need for prescribing drugs		0
Requires non-narcotic or	r mildly narcotic analgesics	1
Requires strong opioid analgesics or endoscopic intervention.		
		2
Surgical interventions		<u> </u>
Surgery on the pancreas for any reason		4
Exocrine pancreatic in	sufficiency	
Lack of exocrine insufficiency		0
The presence of mild, moderate or biased exocrine insufficiency that		1
does not require enzyme	1 IV	
Proved exocrine insufficiency (according to functional tests) or severe		2
pancreatic insufficiency, confirmed by quantitative research of feces		
(> 7 g fat / 24 h), which	disappears or decreases significantly when	
taking enzyme preparations		

Endocrine insufficiency				
Lack of diabetes	0			
Presence of diabetes	4			
Structural changes in the pancreas by the results of visualization (according to				
the Cambridge classification)	_			
Norm	0			
Doubtful CP	1			
Light changes	2			
Moderate changes	3			
Severe change	4			
Severe complications of the internal organs	· · · · · · · · · · · · · · · · · · ·			
Norm	0			
Doubtful HP	1			

Slight changes	2
Moderate changes	3
Severe changes	4

Index of severity	Degree of severity	Score
M-ANNHEIM A	Minimum	0-5
M-ANNHEIM B	Moderate	6-10
M-ANNHEIM C	Average	11 — 15
M-ANNHEIM D	Evident	16-20
M-ANNHEIM E	Heavy	More than 20

M-ANNHEIM CP severity index

Considering the issue of complications, I would like to highlight the revised provisions Atlanta classification of acute pancreatitis and their complications introduced By the International Working Group in 2012, as they are also important for general therapeutic practice. According to the provisions there are 2 types acute pancreatitis: interstitial, edematous and necrotic [5, 7].

The diagnosis of necrotizing pancreatitis is established in case of necrosis of the gland parenchyma, necrosis of the peripancreatic tissues, or in the case of their combination.Less common is only necrosis. peripancreatic tissue and very rarely — only necrosis of the gland.

The definition of severity is given. There are acute pancreatitis. *moderate severity* — when there is no organ failure and local or systemic complications; acute pancreatitis*moderately severe* characterized by the presence of transient organ failure, local or systemic complications; *heavy* acute pancreatitis is characterized by transient organ failure;therefore, patients have one or more local complications.

The development of severity of organ dysfunction is influenced by the respiratory, cardiovascular system and the rapid development of acute renal failure. Local complications include acute peripancreatic fluid accumulations pancreatic pseudocysts, acute post-necrotic fluid accumulations, delimited focus of pancreatic necrosis (sterile or infected). Clinically, repeated episodes of pain indicate a local complication. abdomen, repeated increases in body temperature, activity of pancreatic enzymes, progression of organ dysfunction, or an unfolded picture of sepsis (mortality may reach 80%).

It should be emphasized that the terms "pancreatic abscess" and " intrapancreatic cyst" are not included in the 2012 classification.

In this classification, 2 phases of development of complications are distinguished: *early* (during the first week) and *late* (unfolding in terms of a week to a month). In the first phase, a "cytokine storm" is activated, which leads to an inflammatory response syndrome to damage with the development of organ dysfunction or multiple organ failure. In the late stage, multiorgan pathology develops with localized lesions, which leads to a negative prognosis. It is important

that the first phase is diagnosed clinically, and the second — morphologically — based on CT data with contrast enhancement and taking into account the clinical stage.

Important changes in this classification is the classification of various pancreatic clusters. In acute interstitial edematous pancreatitis, clusters that do not have a contrast capsule are considered *sharp peripancreatic fluid accumulations*. When a capsule is formed, they are called *pseudokists*. This process lasts 4 weeks. In turn, necrotic pancreatitis without a capsule during the first week is diagnosed as *acute necrotic accumulations*, and later with a capsule is diagnosed as *delimited necrosis*. For the correct strategy and tactics of the patient it is necessary to carry out an ultrasound a study or magnetic resonance imaging to establish the presence of a non-liquid necrotic component.

Thus, the proposed classifications address issues related to etiology, pathogenesis, clinics, including complications, prognosis, both acute and HCP (which once again underlines the responsibility of physicians in therapeutic and surgical specialties for the patient's health and life when determining the strategy and tactics of their treatment).

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Chronic pancreatitis: some modern provisions indicated in classifications of the last years

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The article provides information about classifications of pancreatitis (both chronic and acute) close to clinical practice. The issue directly related to medical practice is highlighted, such as classification of diseases and causes of death (ICD-11), with appropriate headings for pancreatic diseases. The analysis of the general provisions indicated in the M-ANNHEIM classification (2007) and in the Marseilles-Rome classification with amendments by Ya. S. Tsimmerman and N. B. Gubergrits (2002), used by the Ukrainian physicians, is analyzed. The authors drew attention of gastroenterologists, therapists, family doctors to the need for prediction of the development of complications that threaten patients' life.