CHRONIC PANCREATITIS

Chronic pancreatitis is an inflammatory pancreas disease with the development of parenchyma sclerosis, duct damage and changes in exocrine and endocrine function.

The causes of chronic pancreatitis

- **Alcohol;**
- Diseases of the ***stomach, duodenum, gallbladder and biliary tract*.** With hypertension in the bile ducts of bile reflux into the ducts of the pancreas.
- **Infection.**
- ✓ Transition of infection from the bile duct to the pancreas,
- ✓ By the vessels of the lymphatic system,
- **Medicinal.** Long -term administration of ***sulfonamides, antibiotics, glucocorticosteroids, estrogens, immunosuppressors, diuretics and NSAIDs.***
- **Autoimmune disorders**.
- **Congenital disorders of the pancreas**.
- **Heredity**;

In the progression of chronic pancreatitis are playing important pathological changes in other organs of the digestive system.

The main symptoms of an exacerbation of chronic pancreatitis:

- ❑ **Attacks of pain** in the epigastric region associated or not with a meal.
- ✓ **Pain radiating** to the back, neck, left shoulder;
- ✓ **Inflammation of the head** - the pain in the right upper quadrant,
- ✓ **body** - pain in the epigastric proper region,
- ✓ **tail** - a pain in the left upper quadrant.
- ✓ **Pain** does not subside after vomiting.
- ✓ **The pain increases** after hot-water bottle.
- ❑ **Dyspeptic disorders,** including flatulence**,**
- ❑ **Malabsorption syndrome:**
- ✓ Diarrhea (50%).
- ✓ Feces unformed, (steatorrhea, amylorea, creatorrhea).
- ✓ Weight loss.
- ❑ **On examination, patients.**
- ✓ **Signs of hypovitaminosis** (dry skin, brittle hair, nails, etc.),
- ✓ **Hemorrhagic syndrome** - a ***symptom of Gray-Turner*** (subcutaneous hemorrhage and cyanosis on the lateral surfaces of the abdomen or around the navel)
- ❑ ***Painful points in the pathology of the pancreas***
- Point choledocho – pankreatic.
- Kacha point.
- The point between the outer and middle third of the left costal arch.
- The point of the left phrenic nerve.
- The point of the left edge-vertebral.
- **Symptom Voskresensky** (pulsating aorta is not palpable, with a reduction in pancreatic edema after treatment, aortic pulsation is again palpable).

Auscultation of abdominal aorta

- 2-3 cm above the navel and 2-3 cm to the left of the white line
- Press stethoscope to the abdomen
- By increasing the pancreas can listen murmur in the abdominal aorta

Diagnosis of pancreatitis.

Blood test (an increase in ESR, neutrophilic leukocytosis with a shift to the left).

Biochemical analysis of blood:

- The level of ***amylase, lipase and trypsin*** increases;
- Increased ***urine amylase***.

- ***Blood sugar*** (hyperglycemia if there is a violation of the intrasecretory functions of the pancreas)
- **Pancreatic elastase**-1 in feces.
- Norm of 200 to 500 mcg / g of feces.
- 100 -200 ug / g of feces medium and light degree exocrine insufficiency.
- <100 mcg / g of feces - severe form exocrine insufficiency.
- **Coprogram** (createrorrhea, steatorrhea, amylorrhoea with exocrine insufficiency);

Instrumental methods of research:

- Ultrasonography (ultrasound)
- CT scan,
- ***US pancreas increase its size.***

The normal size.

- ✓ **Head 30 ± 3 mm.**
- ✓ **The body - to 23 ± 3 mm.**
- ✓ **Tail - to 15 ± 3 mm.**
- **Endoscopic retrograde cholangiopancreatography**
- **Abdominal laparoscopy**

Treatment chronic pancreatitis

Before arrival of the doctor, you must follow three rules: hunger, cold, rest.

Painful symptoms can be reduced by:

- The ice bag to the abdomen.
- Three days of fasting.
- During this period, drink mineral alkaline water without gas.

Diet. № 5.

During the exacerbation, the intake of fatty and fried foods is reduced.

Alcohol ban.

Reduction of acidity of gastric juice.

- **Blockers of histamine H2-receptors** (ranitidine in a dose of 150-300 mg / day, famotidine - 40 mg / day, etc.).
- **Blockers of the proton pump** (omeprazole in a dose of 20-40 mg in the morning, etc.).
- **Antacid preparations** (Almagel, phosphalugel, etc.) 30 minutes before - and 30 minutes after meals.

Management of pain syndrome.

- **Analgesics -** ***analgin, baralgin*** are used, except ***morphine.***
- With the **spasm of sphincter, Oddi** is used **drotaverine** (no-spike) 40 mg 3 times daily ***mebeverin*** (duspatalin) 200 mg 2 times daily before meals.
- **In severe pain syndrome**, an opioid analgesic is used - **tramadol** (tramal) 1-2 ampoules (50 mg each) parenterally

Decreased synthesis of enzymes.

- **Somatostatin** inhibits the production of ***secretin, cholecystokinin*** and inhibits the secretion of pancreatic enzymes. Use ***sandostatin*** in a dose of 100-250 mcg / h IV for 1-3 days.
- ***Antienzymatic therapy. contrycal, gordoks*** 1-2 times a day (7 - 10 days).
- ***Normalization of the motility of the duodenum and gallbladder.***

Prokinetics are domperidone (motilium) or metoclopramide (cerucal). All these drugs are prescribed in a dose of 10 mg 3 times a day.

- ***Anti-edema therapy***. **To reduce the edema** of the pancreas apply ***furosemide*** 40 mg / day, ***hypothiazide*** 25 mg 3-4 times a day. Within 5-7 days.
- ***Antibacterial therapy.*** It is used in the development of peripancreatitis, cholecystitis or cholangitis. ***Penicillin s*** - ampicillin 0,5-1,5 g 4 times a day in / m; ***cephalosporins*** - cefoperazone (cefobide) 1-2 g 2 times a day;The drugs are used for 7-10 days.
- ***Enzyme therapy*** With reduced inflammation. ***Creon*** 10,000 1-2 capsules during or after a meal. Also use ***pancreatin, mezim forte, festal***.
- In severe steatorrhea use of ***vitamins (A, D, E, K)***, as well as ***group B***.

CHRONIC CHOLECYSTITIS

Chronic cholecystitis - chronic inflammation of the gallbladder, which is combined with dyskinesia of the gallbladder and sphincter apparatus and violation of biochemical characteristic bile.

The etiology of chronic cholecystitis

- **Bacterial cholecystitis.** (E. coli, streptococcus, staphylococcus, etc.)

Bacteria can enter the gall bladder **hematogenous, lymphatic**, or by **ascending from the duodenum**.

- **Viral cholecystitis.** It can be a in acute hepatitis - A, B, C, E, D.
- **Parasitic cholecystitis** (ascarids, opistorhoz).
- **Protozoa**
- **Autoimmune cholecystitis**. Due to immune imbalance.
- **Allergic cholecystitis**. Occurs when the impact of bacterial and food allergens.
- **Enzymatic (chemical) cholecystitis.** This variant is developed for admission of pancreatic juice into the gallbladder.

Chronic cholecystitis divide without stones and calculous.

The degree severity of cholecystitis:

- easy
- moderate
- heavy

Stage of the disease:

- Remission
- Subacute stage;
- Aggravation;

Gallbladder dyskinesia

- present
- not present

If there are complications:

- Uncomplicated
- Complicated

Clinical features.

- **Pain syndrome.**
- **Localization of pain** is most often in the right hypochondrium.
- **Pain occurs** in violation of the diet (fried and fatty foods, alcohol, etc.), emotional stress.
- **Radiating** under the right scapula, right shoulder and neck.
- **Character pain** depends on the type dyskinesias of the biliary system:
  - ✓ when **hypotonic** dyskinesia observed a dull, aching pain;
  - ✓ when **hypertonic** - acute, paroxysmal.
- **Dyspeptic syndrome:**
  - ✓ Bitterness,
  - ✓ Nausea,
  - ✓ Feeling of heaviness in the epigastric,
  - ✓ Unstable defecation,
  - ✓ Flatulence .
- Increased body **temperature** to subfebrile.
- **The syndrome of autonomic dysfunction** is detected in most patients
  - ✓ increased fatigue,
  - ✓ irritability,
  - ✓ sweating,
  - ✓ headaches,
  - ✓ tachycardia and others.

The Clinic of chronic cholecystitis depends on:

- Severity of the process,
- Type of dyskinesia,

- Concomitant diseases of the digestive system.

Symptoms of gallbladder disease:

The symptoms of compression of the gallbladder

- **Symptom Kera** - with pressure on the point of the gallbladder pain increases on inspiration
- **Symptom Murphy** - with pressure on the point of the gallbladder is impossible to breathe because of the pain.

Symptoms of shaking gallbladder

- **Symptom Ortner** - pain with a small impact on the costal arch.

Painful points in the pathology of the gallbladder:

- **The point of the gallbladder.** (This point is located at the intersection of the external border of the rectus muscle and the costal arch or liver).
- **Symptom of Mussie.** The point of the diaphragmatic nerve on the right. A symptom positive for pericholecystitis.
- Point **acromial process**
- The point **angle of the scapula**
- **Paravertebral points at VIII-XI thoracic vertebrae**

For the diagnosis of chronic cholecystitis use:

General blood analysis.

- Leukocytosis,
- neutrophilic shift to the left,
- accelerated ESR.

Blood chemistry. It may be an increase in

- alkaline phosphatase,
- β- and γ-globulins.

Instrumental methods of research.

- Ultrasound gallbladder.
- X-ray study of the gallbladder.

Ultrasound of the gall bladder to determine:

- Body size,
- Its deformation
- The presence of constrictions,
- Gall bladder wall thickening (3 mm)
- Cholesterosis,
- The presence of stones and tumors.
- Identify the type of dyskinesia

of the gallbladder.

X-rays: Intravenous and oral cholecystography - for diagnostics:

- Body size,
- Its deformation,
- The presence of constrictions,
- Dyskinesia,
- Change of wall gallbladder,
- Detect stones.

Rarely used:

- **Computed tomography (CT)**
- **ERCP** is performed to detect lesions of the bile and pancreatic ducts.
- **Methods for studying the biliary system with isotopes(**Holestsintigraphy**).**
- **Endoscopic retrograde cholangiopancreatography**
- **Cholescintigraphy** (the isotope enters the liver then in the biliary tract)

Treatment of chronic cholecystitis in acute phase:

- **Diet 5.**

When **hypertonic dyskinesia:**

- ✓ Frequent small feedings (4-5 times a day);
- ✓ Limit foods that cause gallbladder contraction (fat, meat products, vegetable oil, beer);

✓ Mineral water with low mineralization.

When **hypotonic dyskinesia:**

✓ Products with choleretic action (butter and vegetable oil, black bread);

✓ Mineral waters with a high degree of mineralization.

❑ ***Drug therapy:***

➢ **Antibacterial therapy**

✓ **Antibiotics affecting coliform microorganisms**: tetracycline, doxycycline.

✓ **Sulfonamides** (sulfadimetoksin, Biseptol),

✓ **Nitrofurans** (furadonin),

✓ **Metronidazole** (Trichopolum) and others.

At elevated temperature and severe pain, use intramuscular and intravenous antibiotics

➢ **Anti-inflammatory therapy** (baralgin, ibuprofen)

➢ **Antioxidants** (Liping, coenzyme, Glutargin)

➢ **Choleretic:**

✓ ***Preparations containing bile or bile acids:*** allohol, liobil, dehydrocholic acid (hologon) holenzim;

✓ ***Synthetic drugs***: oksafenamid, Nicodin;

✓ ***Herbal preparations:*** hofitol, Flamini, corn silk and others.

➢ If a patient dyskinesia of the gallbladder according to the ***hypotonic type*** is used - **cholekinetics** :

✓ Magnesium sulfate,

✓ Olive oil and other oils,

✓ Sorbitol

✓ Xylitol

✓ Holosas and others.

➢ **Drugs affecting the motor function of the gastrointestinal tract:**

✓ **Anticholinergic drugs** (atropine, metacin, platifillin)

✓ **Nitrates** (nitrong fort, nitrosorbid)

✓ Non-selective **calcium channel blockers** (nifedipine, verapamil)

✓ **Myotropic antispasmodics** (Halidorum, no-spa)

✓ **Prokinetic** (Motilium, trimebutine).

➢ **Detoxification therapy** is an exacerbation of the symptoms of intoxication. (Intravenous administration ***Reopolyglucin, 5% glucose solution***)

➢ In severe cases, we can use **hepatoprotectors and immunomodulators.**

➢ **Treatment of complications and comorbidities**

Gallstone disease

This is disease, which associated with the formation of stones in the gallbladder or bile ducts, as well as a possible violation of ductal patency due to blockage stone.

The etiology of gallstones is not well known.

➢ Description of gallstones in children, even the first month.

➢ In 30% of patients after 70 years on the autopsy reveal gallstones.

So, the formation of stones is not always combined with metabolic disorders of cholesterol.

Now, we can know only some exogenous and endogenous factors that increase the likelihood of stone formation.

Risk factors for forming cholesteric stones

➢ **Age over 40 years**

➢ **Female gender**

➢ **Genetic factors**

➢ **A diet low in fiber and high in fat**

➢ **Obesity**

➢ **Pregnancy (pregnancy was more, the higher the risk)**

➢ **Hyperlipidemia**

➢ **The loss of bile acid (after resection of the small intestine or diseases)**

➢ **Diabetes mellitus**

➢ **Dyskinesia of the gallbladder and inflammation**

- **Total parenteral nutrition**
- **And many other factors.**

Clinical features of cholelithiasis

- Two-thirds of cases are asymptomatic gallstones flow.
- Risk of biliary colic during the year in these patients is 1-4%.
- In patients with asymptomatic gallstones rarely develop complications.

The main syndromes and symptoms of biliary colic:

- ***Pain syndrome.*** **Syndrome, biliary colic occurs when the stone passes through the bile duct.**

Duration of pain in biliary colic depends on:

- **stone diameter,**
- **its location**
- **and rate of passage to the biliary tract.**

Pain in the right upper quadrant, radiating to the right clavicle, right hand, in the back.

- ***Syndrome of obstructive jaundice***
- **Yellowness** of the skin (**jaundice**),
- **Dark urine**,
- **Discolored feces**.
- ***Dyspeptic syndrome***
- **Nausea and vomiting**. In vomit - **bile**,
- Feeling of **bitterness** in the mouth.
- ***Cholestasis syndrome.***In case of prolonged pain and obstruction develops **itchy skin**

With occlusion of the cystic duct arises: **inflammation, edema of the gall bladder and then develop a syndrome of peritoneal irritation.**

When obstruction of the common bile duct may be formed:

- Inflammation of the bile ducts and liver (***cholangitis, cholangiohepatitis***).

- ***Acute pancreatitis.*** This is due to reflux of bile into the pancreatic duct.

Diagnosis of cholelithiasis.

Stones in the biliary system are determined by:

- **Ultrasonic methods** of investigation
- **X-ray** (cholecystography)
- **Computer tomography**

With obstructive jaundice of unknown genesis, we can conduct:

- **Endoscopic retrograde cholangiopancreatography**,
- **Bilistsintigraphy.**
- **Laparoscopic cholecystocholangiography**.
- **Bilistsintigraphy** (radioisotope method for studying the biliary tract). Method to determine the functional state of the biliary system, the time spent isotope in the liver, gallbladder and the duodenum.

Laboratory tests:

- ✓ Signs of inflammation in the blood of calculous cholecystitis
- **Leukocytosis with a left shift**,
- Accelerated **ESR**;
- When complete blockage of the common bile duct symptoms of **obstructive jaundice**.
- High levels of bilirubin,

Treatment of gallstone

- **Nonsurgical:**
- Drug dissolution of gallstones.
- Extracorporeal methods of crushing stones
- **Surgical:**

Laparoscopic cholecystectomy

Indications for conservative treatment of cholelithiasis

- Asymptomatic cholelithiasis,
- Attacks of biliary colic are very rare,
- There are contraindications for surgery.

- The presence of pure cholesterol stones.
- Stones with a diameter of not more than 1-2 cm.
- Found gallstones no more than 2-3 years ago.

Contraindications to the conservative treatment of cholelithiasis :

- **Non-functioning gall bladder** (due to cystic duct obstruction);
- **The presence of large stones** (diameter greater than 2 cm), **pigment stones and other;**
- **Jaundice (**mechanical, parenchymal**);**
- **Failure of the liver and elevated transaminase levels;**
- **Kidney damage;**
- **Signs of gastrointestinal disease, diarrhea, presence of enterocolitis;**
- **Pregnancy.**

We can use the treatment of chronic cholecystitis and the dissolution or reduction of stones.

- **Ursodeoxycholic and henodeoxycholic acids** (**henofalk, henohol, urzofalk**). 0,75-1,5 g initial dose (depending on body weight) per day.
- **Combination drug** - **litofalk,** 1 tablet contains 250 mg **ursodeoxycholic and henodeoxycholic acids** assigned 2-3 tablets a day.

The treatment with these drugs can take up to 2 years, if a positive effect is seen.

These drugs reduce the lithogenicity of bile, helps dissolve gallstones.

- **Rovahol (Olimetin) - product of olive oil.**
- **Liobil , phenobarbital , ziksorin)**.
- **Herbal preparations**: sandy immortelle, corn stigmas.

Extracorporeal methods of crushing stones

Contact methods:

- Mechanical crushing stones in the gallbladder;
- Crushing stones in the gallbladder with a laser.

Remote crushing of stones

- Extracorporeal shock wave lithotripsy

Some features. The method we use only 15% of patients.

Complications of extracorporeal lithotripsy:

- The possibility of **jaundice** due to the blockade of the biliary tract stone fragments
- The possibility of **pancreatitis** (inflammation of the pancreas).
- The main damage of this method – high **recurrence of gallstones**. After 5 years, recurrence is 20-50%.