

“MAIN PANCREATIC DUCT STENOSIS AS A COMPLICATION OF CHRONIC PANCREATITIS.”**Tolibov Farrux Farhodivich**tolibovf1@gmail.com

Asia International University, Bukhara, Uzbekistan

Annotation: Chronic pancreatitis is a progressive inflammatory disease of the pancreas characterized by irreversible morphological changes and gradual impairment of both exocrine and endocrine functions. One of the significant complications of chronic pancreatitis is stenosis of the main pancreatic duct, which leads to impaired outflow of pancreatic secretions, increased intraductal pressure, and progression of pancreatic tissue damage.

The development of pancreatic duct stenosis is associated with chronic inflammation, fibrosis, and structural remodeling of the pancreatic parenchyma. Clinically, this condition may manifest with persistent abdominal pain, recurrent exacerbations of pancreatitis, and digestive disorders. Timely diagnosis plays a crucial role in preventing further complications. Modern diagnostic methods include ultrasound examination, computed tomography (CT), magnetic resonance cholangiopancreatography (MRCP), and endoscopic retrograde cholangiopancreatography (ERCP).

Management of main pancreatic duct stenosis depends on the severity of the condition and may include conservative therapy, endoscopic interventions, or surgical treatment aimed at restoring ductal patency and relieving symptoms. Early detection and appropriate therapeutic strategies contribute to improved patient outcomes and prevention of disease progression.

Keywords: Chronic pancreatitis; Main pancreatic duct stenosis; Pancreatic duct stricture; Pancreatic fibrosis; Pancreatic duct obstruction; ERCP; Pancreatic duct dilation.

Introduction: Differential diagnosis is performed with:

Stricture (narrowing) of the main pancreatic duct is not considered a separate disease. In most cases, it develops as a consequence of an underlying pathological condition. In rare cases, stenosis of the pancreatic duct may be associated with congenital anomalies of the pancreas.

Causes of Pancreatic Duct Stenosis

The main causes of pancreatic duct stenosis include:

- Inflammatory processes of the pancreas — all types of pancreatitis, including chronic pancreatitis.
- Destructive changes of the gland, such as pancreatic necrosis.
- Pancreatic tumors, most commonly involving the head of the pancreas, and less frequently the body and tail.
- Hereditary diseases, such as cystic fibrosis.
- Traumatic injury of the pancreas.

Clinical Presentation

Stenosis of the pancreatic duct leads to impaired digestive processes. There are no specific symptoms that clearly characterize this condition. However, the main signs that may suggest the presence of the pathology include:

- Severe abdominal pain localized in the lateral and upper parts of the abdomen, often radiating to the hypochondrium. In many cases, such pain is difficult to relieve with analgesics.
- Digestive disorders, manifested by diarrhea and the presence of undigested food particles in the stool.
- Loss of appetite.

- Persistent nausea and frequent episodes of vomiting.

Diagnosis

The symptoms of pancreatic duct stenosis are similar to many pathological processes occurring in the abdominal cavity, including diseases of the pancreas itself. Therefore, comprehensive diagnostic evaluation is required.

One of the most effective methods for assessing the diameter of the pancreatic duct is endoscopic retrograde pancreatography (ERCP). This method is used when ultrasound and magnetic resonance imaging (MRI) are not sufficiently informative. ERCP allows visualization of changes in the diameter of the Wirsung duct, as well as evaluation of the function of the pancreatic and biliary ducts. The procedure involves filling the ducts with a special contrast agent, followed by radiographic examination.

Laboratory tests are also used in the diagnosis of pancreatic stenosis. These include urinalysis, detailed biochemical blood analysis, evaluation of blood composition, lipid profile assessment, and determination of digestive enzyme levels.

Ultrasound examination (sonography) is used as an additional diagnostic method for abdominal organs. It allows measurement of the duct diameter and visualization of structural changes.

Magnetic resonance imaging (MRI) provides visualization of the pancreatic ducts as well as the biliary tract.

Treatment

In order to treat pancreatic duct stenosis, it is necessary to eliminate the underlying cause of the duct narrowing. After diagnosis and confirmation of stenosis, the specialist determines the treatment strategy depending on the severity of the pathology.

Management of pancreatic duct stricture includes a comprehensive approach, which may consist of:

- dietary therapy
- pharmacological treatment
- surgical intervention, which is considered the most effective method in severe cases.

Diet and Lifestyle

Since pancreatic duct stenosis most often develops as a consequence of pancreatitis, therapeutic nutrition is prescribed according to dietary recommendations used for pancreatic inflammation.

The therapeutic diet No. 5 for pancreatic diseases begins with several days of fasting. After that, food is consumed in small portions (200–300 g) 6–8 times per day for about a week. Meals should be boiled or steamed, warm, and finely ground.

Dietary table No. 5 includes increased intake of protein-rich foods within 6–8 days, while fat and carbohydrate consumption is reduced. Salt intake is limited to 5 g per day.

Dietary Management

Nutrition in pancreatic duct stenosis excludes soups prepared with rich broths (except light chicken broth), fatty meat and fish, raw vegetables and fruits containing coarse fiber (such as onion, spinach, radish, white cabbage), canned foods, spices, smoked products, coffee, bread, flour-based and confectionery products, as well as carbonated beverages.

Smoking and alcohol consumption are strictly prohibited.

Pharmacological Treatment

To eliminate the underlying cause of stenosis, a specialist may prescribe specific

medications. In pancreatitis, especially in its acute forms, drugs that reduce the production and activity of pancreatic digestive enzymes are used, as well as detoxifying agents. If necessary, particularly in cases of bacterial infection, antibiotics may be prescribed.

To improve digestion impaired by pancreatic duct stenosis, enzyme preparations such as Festal and Mezim may be administered. These medications are usually taken immediately after meals.

In cases of severe pain, analgesics such as Baralgin, and in more severe cases Tramal, may be used.

To relieve spasms of the ducts, antispasmodic drugs such as Papaverine and No-spa are prescribed.

Since pancreatic stenosis is associated with impaired enzymatic function of the gland, enzyme replacement therapy may be recommended. Drugs used for this purpose include Digestal, Liclease, Creon, and Pancreatin.

To manage accompanying symptoms such as diarrhea and vomiting, antidiarrheal agents (e.g., Regidron, Tannacomp) and antiemetic drugs (e.g., Cerucal, Metucal) may be used.

For restoration of pancreatic function and intestinal microflora, medications such as Pancreatinol, Bifidumbacterin, and Hilak-forte may be prescribed.

It should be noted that self-medication in pancreatic stenosis is not recommended, as inappropriate drug use may worsen the condition.

Surgical Treatment

In many cases, surgical intervention is used to treat pancreatic duct stenosis, most commonly through minimally invasive laparoscopic procedures. Depending on the clinical situation, the following approaches may be applied:

- Recanalization of the narrowed segment of the main pancreatic duct using endoprosthetic stenting through percutaneous access.
- Open reconstruction of the pancreatic duct and bile ducts.
- In rare cases, resection of the pancreatic head with reconstruction of the biliary ducts.

Conclusion

Pancreatic duct stenosis is one of the disorders that develops as a consequence of pancreatic diseases. With timely diagnosis and appropriate treatment, the functions of the pancreas can be restored along with the normal functioning of the gastrointestinal tract.

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