

Acute Pancreatitis

National Pancreas Foundation

Brochure

INTRODUCTION – The Pancreas

The pancreas is an organ that has two important functions in digestion: the production of enzymes to digest food and the production of hormones to control blood sugar. The pancreas is positioned beneath and behind the stomach in a location referred to as the retroperitoneum. It is surrounded by the stomach, small intestine, spleen, and liver. The pancreas has a structural shape similar to a fish with the three main parts being the head, body, and tail.

The pancreas is responsible for producing enzymes to digest food. These enzymes pass through the pancreas into the intestine through a pipe referred to as the pancreatic duct. Without these enzymes, food is not digested and absorbed, leading to malnutrition, weight loss, and diarrhea.

The pancreas makes insulin and glucagon, two important hormones that control blood sugar. Patients who do not make enough insulin develop diabetes mellitus.

CAUSE OF ACUTE PANCREATITIS

Acute pancreatitis is a sudden inflammation of the pancreas that is usually associated with severe upper abdominal pain. There are an estimated 50,000 to 80,000 cases in the United States each year.

The most common cause of acute pancreatitis is gallstones. Other causes include alcohol use, hereditary conditions, trauma, medications, infections, electrolyte abnormalities, high lipid levels, and hormonal abnormalities. In approximately 15% of cases, the cause of acute pancreatitis is unknown.

CLINICAL SIGNS OF ACUTE PANCREATITIS

Acute pancreatitis generally starts with a pain in the upper abdomen. This pain can be severe, radiate to the back and may last for several days. Relief of pain by sitting up and bending forward is characteristic of pancreatic disease. The pain is often accompanied by nausea and vomiting. Other symptoms include diarrhea, bloating, and fever. Damage to the pancreas may occur when digestive enzymes it produces are activated and begin attacking the organ.

In severe cases the pancreas may become infected. If an infection were to develop, it would be more likely to occur in the first or second week after the onset of pancreatitis. Pancreatic abscess occurs in 3% to 4% of patients with acute pancreatitis. A pancreatic abscess is an ill-defined liquid collection of pus that evolves over a longer period, often four to six weeks. Pseudocysts – collections of tissue, fluid, debris, pancreatic enzymes, and blood which sometimes occur in response to acute attacks of pancreatitis – form in about 15% of patients with this disease.

DIAGNOSIS OF ACUTE PANCREATITIS

Diagnosis of acute pancreatitis is often difficult because of the deep location of the pancreas. A physical exam and blood tests to determine the levels of amylase and

lipase are often the first tools used to begin the diagnosis. When these digestive enzymes, produced by the pancreas, are elevated, it is often a sign of acute pancreatic inflammation. When radiography is necessary, state-of-the-art techniques and equipment is recommended for accurate diagnosis. An imaging team may use one or more modalities to make a diagnosis including CAT (computed tomography) scan, MRCP (magnetic resonance cholangiopancreatography), MRI (magnetic resonance imaging), EUS (endoscopic ultrasonography) and ERCP (endoscopic retrograde cholangiopancreatography).

TREATMENT OPTIONS

Treatment for acute pancreatitis depends on the severity of the condition. Sometimes the patient needs hospitalization with administration of intravenous fluids to help restore blood volume. Antibiotics are often prescribed if infection occurs and pain medications are often used to provide relief. Surgery is sometimes needed when complications such as infection, cysts, or bleeding occur.

The treatment plan for a patient with acute pancreatitis often involves a team of specialists including gastroenterologists, surgeons, and radiologists. After the disease has been treated successfully, doctors will try and determine the cause of the attack and try to prevent recurrence.

Patients usually recover fully from acute pancreatitis and do not experience recurrence if the cause is removed. Alcohol consumption should be eliminated or greatly reduced, even if it is not the determined cause of the disease. Smoking, which stresses the body's defense against inflammation, should be stopped. A trial and error approach to specific foods is usually indicated.

SUPPORT AND INFORMATIONAL RESOURCES

The National Pancreas Foundation
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