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.

CAUSES OF CHRONIC PANCREATITIS
Chronic pancreatitis is a progressive disorder associated with the destruction of the pancreas. The disease is more common in men and usually develops in persons between 30 and 40 years of age.

Initially, chronic pancreatitis may be confused with acute pancreatitis because the symptoms are similar. The most common symptoms are upper abdominal pain and diarrhea. The pain may radiate directly through to the back. As the disease becomes more chronic, patients can develop malnutrition and weight loss. If the pancreas becomes destroyed in later stages, patients may develop diabetes mellitus.

The most common cause of chronic pancreatitis in the United States is chronic alcohol consumption. Additional causes include cystic fibrosis and other hereditary disorders of the pancreas. More research is needed to determine other causes of the disease.

CLINICAL SIGNS OF CHRONIC PANCREATITIS
Chronic pancreatitis is signaled by repeated attacks of pain or constant severe abdominal pain. The disease may develop after only one attack, especially if the pancreatic ducts are damaged. At the onset, the symptoms of chronic pancreatitis are the same as symptoms of acute pancreatitis.

As chronic pancreatitis progresses, the pancreas weakens and is unable to produce the enzymes needed to digest food. If food is not broken down, nutrients are not absorbed, leading to diarrhea, malnutrition, and significant weight loss. If the pancreas is destroyed, it will not produce insulin and patients will become diabetic.
DIAGNOSIS OF CHRONIC PANCREATITIS
Diagnosing chronic pancreatitis is often difficult because of the deep location of the pancreas. The most important clue to a proper diagnosis is an accurate medical history. Doctors will perform a thorough physical exam and routine blood tests to determine the levels of amylase and lipase, which are often the first tools used to begin the diagnosis. When the pancreas must be examined, doctors generally refer patients to a state-of-the-art imaging team. Several techniques including CAT (computed tomography) scan, MRCP (magnetic resonance cholangiopancreatography), MRI (magnetic resonance imaging), EUS (endoscopic ultrasonography) and ERCP (endoscopic retrograde cholangiopancreatography) are used to detect abnormalities.

TREATMENT OPTIONS
The treatment for chronic pancreatitis depends on the symptoms. Most therapies focus on pain management and nutritional support. Oral pancreatic enzyme supplements are utilized to aid in the digestion of food and absorption of nutrients. Patients who develop diabetes require insulin to control blood sugar. A low-fat, low-protein diet is recommended in the treatment plan. Alcohol consumption should be totally avoided.

HEREDITARY PANCREATITIS
In some cases, pancreatitis is related to inherited abnormalities of the pancreas or intestine. Acute recurrent attacks of pancreatitis early in life (under age 30) can often progress to chronic pancreatitis. The most common inherited disorder that leads to chronic pancreatitis is cystic fibrosis. Recent research demonstrates genetic testing can be a valuable tool in identifying patients predisposed to hereditary pancreatitis.

As in chronic pancreatitis, hereditary pancreatitis is a progressive disease with a high risk of permanent problems. Patients with these disorders may have chronic pain, diarrhea, malnutrition, or diabetes. Once diagnosed with inherited pancreatitis, the treatment plan will usually include pain medications and pancreatic enzyme replacement therapy to aid in digestion. All patients with pancreatitis are advised to discontinue drinking alcohol, stop smoking, and eat a balanced, low-fat diet.

SUPPORT AND INFORMATIONAL RESOURCES
The National Pancreas Foundation
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