

Differentiating Between Chronic Pancreatitis and Similar Conditions

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The symptoms of chronic pancreatitis are often similar to those of other health conditions which can pose a differential diagnostic challenge for clinicians.

The United States has one of the highest incidence rates of pancreatitis in the world – with over 300,000 cases each year. The last decade has seen a mean annual increase of almost 3% which is most likely due to increased alcohol intake coupled with the regular consumption of high-fat foods. Pancreatitis is characterized by the inflammation of the pancreas and it is divided into 2 main types – acute pancreatitis (isolated episode) and chronic pancreatitis (disease of the pancreas). The common symptoms of pancreatitis include upper abdominal pain, nausea and vomiting – these symptoms are common to several other gastrointestinal ailments which explains the high rate of misdiagnosis of pancreatitis.

Difficulties in diagnosing pancreatitis

The differential diagnosis for pancreatitis includes an ulcer of the stomach or duodenum, liver inflammation, small bowel obstruction, functional bowel disorders, abdominal aortic aneurysm, an obstruction of the intestine and pancreatic cancer. In some cases, cholecystitis and choledocholithiasis may present as pancreatitis. Since all these conditions have similar symptoms, acute pancreatitis is generally a clinical diagnosis. According to the Atlanta classification system for pancreatitis (updated in 2013), diagnosis requires a minimum of 2 of the following criteria:

1. Severe or persistent epigastric pain that typically radiates to the back
2. Results from serum amylase or lipase tests that are at least 3 times more than the upper normal limit
3. Evidence from abdominal ultrasound, endoscopic ultrasound, contrast-enhanced computed tomography (CECT) or magnetic resonance imaging (MRI)

Pancreatitis is often misdiagnosed as cholecystitis or intestinal blockage since both these conditions cause abdominal pain as well as elevated amylase levels. To complicate matters even further, some patients with pancreatitis may not have elevated amylase. When testing for pancreatitis, it is best to test for both amylase and lipase; lipase tests are particularly important for a definite diagnosis as they stay elevated for longer periods as compared to amylase levels.

Autoimmune pancreatitis is a relatively rare type of chronic pancreatitis that often **mimics pancreatic cancer**. Both conditions present with abdominal discomfort, weight loss and elevated levels of carbohydrate antigen 19-9 (CA 19-9). Furthermore, both conditions can result in the development of a pancreatic mass and/or jaundice. If tissue diagnosis is inconclusive, IgG4 and antinuclear Ab levels can determine if the patient is suffering from autoimmune pancreatitis or pancreatic cancer. In such cases, a correct differential diagnosis is of paramount importance as the treatment modalities for both conditions are essentially different.

Causes of Pancreatitis

A patient's complete medical history can play a key role in the diagnosis of pancreatitis as certain health conditions greatly increase the risk of this condition. The causes of pancreatitis include:

1) Gallstones

Gallstones are the most common cause of acute pancreatitis as they account for up to 70% of all cases; this does not mean that everyone who has gallstones will develop pancreatitis – in fact, studies show that only 3-7% of patients with a history of gallstones will go on to develop pancreatitis.

2) Alcohol

Alcohol is the most commonly associated factor of chronic pancreatitis and presents mainly in male adults between 30 to 40 years old. Alcohol frequency, as an etiological factor, increased from 19% in 1940 to 50-80% in 2003. **Chronic heavy alcohol consumption** is responsible for approximately 70% of all pancreatitis cases. The risk of developing pancreatitis increases with an increased average of alcohol consumption as well as increasing doses of alcohol.

3) Diabetes

Type 2 diabetes is associated with a 2.8-fold higher risk of pancreatitis. The concurrence of diabetes mellitus and pancreatitis poses significant problems in terms of case management due to "brittle" glycemic control. Furthermore, some oral hypoglycemic agents used to treat diabetes can further increase the risk of pancreatitis.

4) Infectious agents

Viruses (including the Hepatitis B and herpes simplex virus), bacteria (including Leptospira and Salmonella) Fungi (including Aspergillus) and parasites (including Toxoplasma) can cause pancreatitis. Furthermore, 40-70% of patients with **necrotizing pancreatitis** develop pancreatic infection which is a life threatening complication of this condition. Subsequent sepsis and sepsis-related multiple organ failure account for a 50% mortality rate.

5) Medications

Oral contraceptives can cause a blood clot in the blood vessels of the pancreas through hypertriglyceridemia which can lead to acute pancreatitis. Diuretics have a direct toxic effect on the pancreas and can increase the risk of pancreatic stones. Other medications that are associated with acute pancreatitis include statins, ACE inhibitors and valproic acid.

Diagnosis pancreatitis is no easy task but treating the condition is far more challenging. Acute pancreatitis can be easily treated with IV fluids and pain medication; in severe cases, surgery may be required. However, chronic pancreatitis may require pancreatic enzymes and insulin to compensate for the loss of secretions by the pancreas. An early diagnosis of pancreatitis will reduce the risk of complications and ensure a quick recovery. It is equally important to **identify the underlying factors** in each case to prevent recurrence.

Citations:

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Anita Fernandes is a journalist and a writer by profession. She has been writing extensively on health and wellness related topics for a little over a decade now. Besides her professional interests, she loves a game of basketball or a good hike in her free time to fuel her spirits. "Health is wealth" is one motto of life which she lives by as well as advocates to every reader, who comes across her blogs.



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