

Acute Pancreatitis

Definition

indicates inflammation of the pancreas.

Acute pancreatitis: results from the leakage of pancreatic enzymes into pancreatic tissue, leading to autodigestion.

Chronic pancreatitis: causes are varied and lead to destruction of the pancreatic tissue. Patients may present with pain and/or weight loss due to fat and protein malabsorption.

Clinical Symptoms of Acute Pancreatitis:

sudden onset of epigastric pain that lasts for hours to days and radiates to the back, nausea and vomiting, sweating, weakness, and anxiety. The patient often feels better when sitting up and leaning forward.

Physical examination findings of Acute Pancreatitis:

The patient may be febrile, tachycardic, tachypneic, and hypotensive. The skin of the periumbilical area may be discolored (**Cullen's sign**). Flank ecchymoses (**Grey Turner's sign**) may be present. The abdomen may have mild distention (because of ileus). Upper abdominal and epigastric tenderness (usually without rebound or rigidity) is often present.

Laboratory findings of Acute Pancreatitis:

Elevated serum amylase and lipase. Blood amylase or lipase levels are typically elevated three times the normal level during acute pancreatitis.

Other findings may include leukocytosis (12,000–15,000/ μ L), hypoalbuminemia, hyperglycemia, and elevated aspartate aminotransferase (AST, SGOT), alkaline phosphatase, and bilirubin.

Imaging for Suspected Acute Pancreatitis [but not necessary]:

CT ABDOMEN- PELVIS.

Causes of Acute Pancreatitis:

Biliary stones, Alcohol abuse, Drugs, Hyperlipidemia or Hypercalcemia, Idiopathic or Infectious, Trauma, Surgery (after endoscopic retrograde cholangiopancreatography [ERCP], intra-abdominal surgery) or Scorpion sting.

- **Biliary stones** are the most common cause of acute pancreatitis in hospitalized patients.
- **Alcohol abuse** is the most common cause of pancreatitis overall in the United States.
- Many drugs can cause acute pancreatitis: thiazide diuretics, sulfa antibiotics, pentamidine, and some antiretroviral agents.
- **Hyperlipidemia (types I, IV, V)**. Pancreatitis usually does not occur in hyperlipidemic patients until their serum triglyceride level exceeds 1000 mg/dL.
- **Idiopathic causes:** possibly due to pancreas divisum (a congenital defect), autoimmune pancreatitis, or microlithiasis as the cause. Pancreatic malignancy can also cause acute pancreatitis.
- **Infectious etiologies** include mumps, cytomegalovirus (CMV), human immunodeficiency virus (HIV), and infections caused by *Escherichia coli*.
- Blunt, rather than penetrating, trauma. Blunt trauma may cause ductal disruption, leakage of pancreatic enzymes, and autodigestion of the pancreas leading to pancreatitis.
- **Surgical:** Postsurgical pancreatitis in patients undergoing ERCP.
- **Scorpion stings:** Scorpion stings are a common cause of pancreatitis in the Caribbean islands of Trinidad and Tobago.

Ranson's criteria are used to assess severity and prognosis.

Ranson's criteria are assessed at admission and during the initial 48 hours.

Ranson's Criteria During the Initial 48 Hours. Ranson's greater than 3 is SEVERE.

Base deficit >4 mEq/L

Calcium <8 mg/dL

Hematocrit decrease >10%

Sequestration of fluid >6 L

Oxygen <60 mm Hg

Blood urea nitrogen (BUN) increase of >5 mg/dL

As the number of criteria met increases, so does the mortality rate.

Treatment of Acute Pancreatitis:

- Treatment is primarily supportive and includes bowel rest, aggressive volume resuscitation, pain control, and management of respiratory distress and renal failure.
- Early feeding of patients with pancreatitis (as opposed to prolonged bowel rest) may be associated with improved outcomes.
- Nasogastric tubes are used for gastric decompression in patients with persistent vomiting.
- If gallstones are thought to be the cause, ERCP may be indicated.
- Cholecystectomy should only be considered after the patient recovers from the acute episode.

Complications of Acute Pancreatitis:

- **Pancreatic abscess:** should be suspected if the patient worsens after initial improvement. Persistent pain and fever are clues to the occurrence of an abscess. Re-image the patient with a CT scan.
- **Pancreatic pseudocyst:** occurs in 10%-20% of patients.
- **Renal failure and respiratory failure** are the two most common systemic complications and can be life-threatening.

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