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Pancreatitis (Inflammation Of The Pancreas)

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Abstract
Pancreatitis is an inflammatory condition of the pancreas characterized by premature activation of pancreatic enzymes that lead to auto-digestion of pancreatic tissue. This article discusses the clinical manifestations, diagnostic approaches, and treatment protocols of acute pancreatitis, focusing on evidence-based and intensive care strategies. The content is compiled based on real clinical practices and scientific references.
Keywords: pancreatitis, enzymes, amylase, lipase, necrosis, contrical, morphine, parenteral therapy, inflammation.

Introduction

Pancreatitis refers to inflammation of the pancreas that may present as acute or chronic. Acute pancreatitis is a potentially life-threatening condition requiring urgent diagnosis and management. The pathogenesis involves the early activation of pancreatic digestive enzymes within the gland, leading to autodigestion, inflammation, and, in severe cases, necrosis.

Etiology of Pancreatitis

Pancreatitis is typically classified into acute and chronic forms. The causes may vary, but the most common etiological factors include:

1. Gallstones – the leading cause of acute pancreatitis.
2. Alcohol abuse – especially with chronic, heavy consumption.
3. Hypertriglyceridemia – serum triglyceride levels >1000 mg/dL.
4. Hypercalcemia – often due to hyperparathyroidism.
5. Medications – e.g., azathioprine, thiazides, valproic acid.
6. Autoimmune pancreatitis
7. Trauma – especially blunt abdominal trauma.
8. Post-ERCP pancreatitis – following endoscopic procedures.
9. Infections – viral (e.g., mumps), bacterial, or parasitic.
10. Genetic mutations – such as PRSS1, SPINK1 (common in hereditary pancreatitis).

Clinical Features and Symptoms of Acute Pancreatitis

1. Epigastric pain
Severe, constant, and sharp
Radiates to the back
Worse after eating, especially fatty meals
Often relieved by leaning forward
2. Nausea and vomiting
Persistent and non-relieving
3. Fever
Mild to moderate due to systemic inflammation
4. Abdominal distension and tenderness
Especially in the upper abdomen
Guarding and rebound tenderness may occur
5. Tachycardia and hypotension
Signs of hypovolemia and systemic inflammatory response
6. Jaundice
If bile duct obstruction is present

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7. Grey-Turner's sign
Flank ecchymosis (sign of retroperitoneal hemorrhage)
8. Cullen's sign
Periumbilical ecchymosis
9. Dyspnea
Due to diaphragmatic irritation, pleural effusion, or ARDS

Clinical Features and Symptoms of Chronic Pancreatitis

1. Recurrent upper abdominal pain
Intermittent or constant dull pain
May worsen with food or alcohol
2. Steatorrhea (fatty stools)
Due to exocrine insufficiency
Bulky, foul-smelling stools that float
3. Weight loss
Despite normal or increased food intake
4. Diabetes mellitus
Due to endocrine dysfunction (loss of islet cells)
5. Fat-soluble vitamin deficiency (A, D, E, K)
Secondary to fat malabsorption
6. Pancreatic calcifications
Seen in imaging studies (CT, X-ray)

Diagnosis and Investigations

Laboratory Tests:

1. Complete Blood Count (CBC) – shows leukocytosis and elevated ESR (erythrocyte sedimentation rate).
2. Blood Biochemistry – reveals elevated pancreatic enzyme levels:
Amylase
Lipase
Trypsin
3. Urine and Stool Tests – may show indirect signs of inflammation but are not diagnostic.

Instrumental (Imaging) Examinations:

1. Ultrasound of the abdominal organs – identifies swelling, inflammation, or changes in pancreatic borders.
2. EGD (Esophagogastroduodenoscopy) – to assess gastric and duodenal involvement.
3. CT or MRI scans – to confirm necrosis, fluid collections, or complications.

> Note: If necrosis or severe complications are detected, surgical intervention may be required to remove necrotic tissue

Treatment Protocols

1. Fasting and Parenteral Nutrition
Patients are kept NPO (nil per os) for the first 3–5 days to suppress enzyme secretion.
Intravenous amino acids, glucose, and electrolytes are administered for nutritional support.
2. Medications and Infusion Therapy
Medication Dosage & Route Duration
Contrical 20,000 IU NaCl 0.9% – 200 ml IV 5 days
Levofloxacin 100 ml IV Once daily, 5 days
Coenzyme preparation (Kuamin) 250 ml IV Once daily, 5 days
Platyphyllin 0.2% 1.0 ml IM Once daily, 5 days
Morphine 0.1% 1.0 ml IV (if needed) For severe pain
Vitamin B complex 2.0 ml IM Once daily, 5 days
Reosorbilact 200 ml IV Once daily, 5 days
Almagel A 1 tsp three times daily After meals
Nolpaza (Pantoprazole) 40 mg tablet Once daily, before meals

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> **Warning**: Enzyme preparations (like pancreatin, mezim) should not be prescribed during the acute phase of pancreatitis, as they may stimulate enzyme production and exacerbate necrosis.

Conclusion

Early diagnosis and correct therapeutic approaches significantly improve outcomes in acute pancreatitis. Treatment requires a combination of fasting, fluid therapy, enzyme inhibition, antibiotics, and supportive care. Compliance with medical guidelines and patient adherence to dietary restrictions play a vital role in recovery and prevention of recurrence.

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