

## Chronic Pancreatitis: The Disease Burden, Current Therapies, Limitations and Future Approach

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Chronic pancreatitis (CP) is a chronic, unremitting inflammatory condition of the pancreas where the normal architecture of the pancreas is destroyed by repeat bouts of injury and inflammation. This leads to the replacement of normal pancreatic tissue by fibrosis. Having CP is a significant hindrance to the quality of life for the patient. People in underdeveloped countries are at increased risk of pancreatitis due to the increased consumption of alcohol and tobacco products. This is significantly higher than the rate of 5 to 12 cases per 100,000 of pancreatitis incidence among the developed nations.

Although alcohol and tobacco are the main risk factors ascribed to the development of CP, other conditions, such as autoimmunity, genetic mutations (PRSS, SPINK1, CFTR), pancreatic duct blockage and familial pancreatitis can be responsible for causing chronic pancreatitis.

Chronic pancreatitis leads to significant upper abdominal pain, which is the main clinical symptom that brings the patients to their healthcare providers. Other presenting symptoms of CP include nausea, vomiting, weight loss, diarrhea, oily or fatty stools. Individuals with chronic pancreatitis frequently lose weight even when their appetite and eating habits are normal. The weight loss occurs because the body does not secrete enough pancreatic enzymes to digest food so the nutrients are not absorbed normally, leading to malnutrition. Since, the problem originates in the enzyme producing acinar portion of the pancreas, the endocrine or insulin and glucagon producing portion of the pancreas known as islet of Langerhans are intact initially but if nothing is done and the inflammation spreads around, it engulfs the islets rendering the patient diabetic for the rest of his or her life, known as "Pancreatogenic" or Type IIIc Diabetic Mellitus.

Though not a life-threatening condition, individuals with CP often find it difficult to manage their daily activities and hold on to jobs successfully due to the pain and other disabling symptoms. Patients are often prescribed opioids which work initially, but fail to provide long lasting relief and do nothing to prevent the recurrence of the symptoms. This leads to a never ending cycle of suffering and emergency room and primary care physician visits for these patients.

Patients with long-standing CP are also at an increased risk for the development of pancreatic cancer so a wait and watch approach as many patients and their physicians would prefer is not a medically advisable route to take.

As a result, it is necessary that clinicians and scientific researchers in the United States study the causes and treatments of pancreatitis and other diseases of the pancreas to reduce the disease burden and economic costs to the already strained health care system in most countries.