PRIMEVIEW

CHRONIC PANCREATITIS

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Chronic pancreatitis is characterized by chronic inflammation of the pancreas that results in progressive scarring and atrophy of the pancreatic tissue, pain, maldigestion (exocrine pancreatic insufficiency), diabetes mellitus (endocrine dysfunction) and increased risk of pancreatic cancer.

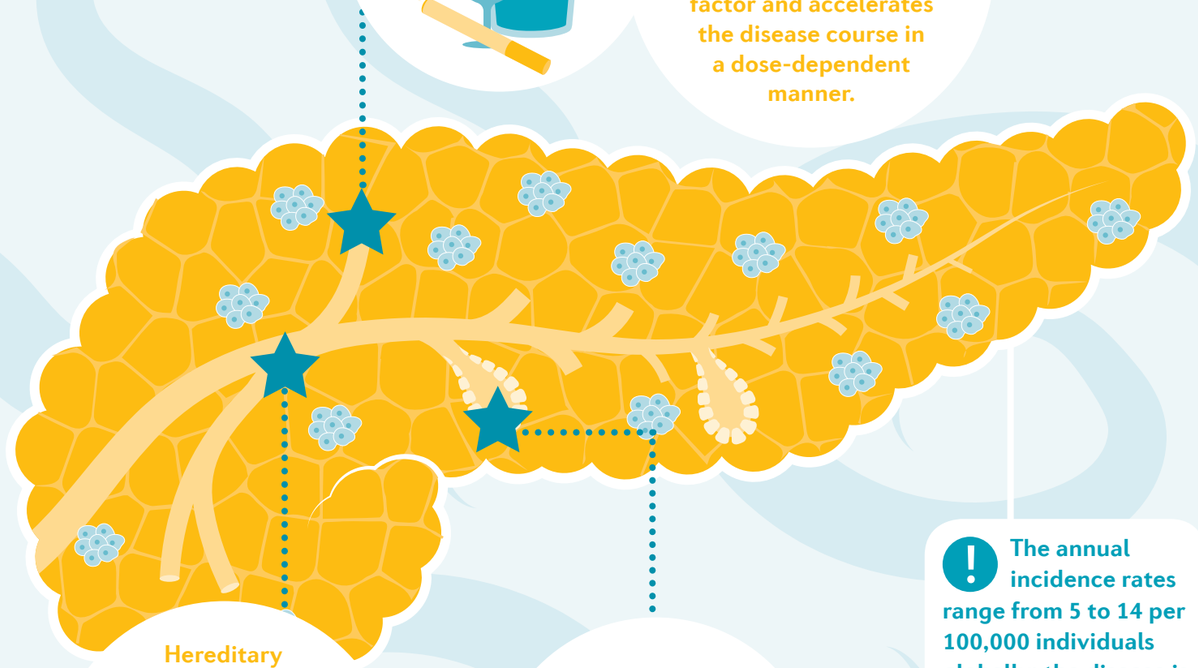
MECHANISMS

Chronic pancreatitis is the consequence of persistent damage to the pancreatic tissue. Several pathways are thought to be involved, acting together or independently. For example, recurrent episodes of acute pancreatitis might be the trigger by inducing a repeated damage–necrosis–fibrosis sequence following each episode. Alternatively, a two-hit model has been proposed, in which a 'sentinel acute pancreatitis' event causes immune activation that can lead to ongoing injury. Environmental factors might trigger a direct metabolic-toxic effect on pancreatic acinar cells or might give rise to oxidative stress. Finally, ductal dysfunction can lead to obstruction and injury.

Pain in chronic pancreatitis might be caused by structural abnormalities in the pancreas, increased pressure in the ductal system, maladaptive changes of the central nervous system (neuropathic pain), sensitization of the sensory neurons in the pancreas and neurogenic inflammation

EPIDEMIOLOGY

50–80% of all cases of chronic pancreatitis are attributed to alcohol abuse. Tobacco smoking is an independent risk factor and accelerates the disease course in a dose-dependent manner.



Hereditary chronic pancreatitis is most commonly associated with mutations in *PRSS1*; variants in other genes are associated with an increased susceptibility.

Other causes are metabolic disorders, chronic obstructive causes (for example, ductal stones), autoimmunity and idiopathic mechanisms.

The annual incidence rates range from 5 to 14 per 100,000 individuals globally; the disease is more common in men than in women

QUALITY OF LIFE

Pain is the most debilitating symptom of chronic pancreatitis, the intensity of which is closely correlated with quality of life. Other factors associated with decreased quality of life are body weight, disease duration, unemployment, depression, fatigue and extra-pancreatic complications.

DIAGNOSIS

Abdominal pain, which originates in the upper abdomen and radiates to the back in a belt-like manner, weight loss and steatorrhoea (excess fat in stool) are often the first signs and, later, diabetes mellitus can develop. Histopathological examination shows fibrosis, atrophy of the acinar parenchyma, duct abnormalities with intraluminal protein plugs and/or calcifications, and pseudocysts. CT and MRI-based techniques can provide structural and functional information. Serum and stool biochemistry can detect exocrine and endocrine pancreatic insufficiency.

As opposed to acute pancreatitis, in which the pancreatic damage can reverse after each attack, chronic pancreatitis is irreversible

MANAGEMENT

The aim of management is to alleviate symptoms and to prevent further disease progression and disease-related complications, such as bile duct obstruction, gastric outlet obstruction and portal vein thrombosis. Genuine pain should be treated with analgesics, pancreatic enzyme replacement should be considered in case of maldigestion and diabetes mellitus should be managed according to established guidelines. 30–60% of patients with chronic pancreatitis will ultimately require some kind of endoscopic or surgical intervention to treat pain and disease-related complications.

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