ABSTRACT

Chronic pancreatitis is considered a risk factor for pancreatic cancer. An exact mechanism how chronic inflammation of the pancreas leads to pancreatic cancer is not yet understood; the possibility of a shared genetic predisposition for both diseases is also assumed. A similar association in patients with AIP has not yet been demonstrated.

The aim of our work was to expand the knowledge about relationship between chronic pancreatitis and pancreatic cancer. We studied the association of the diseases in two synchronous projects. In the first one, we examined the occurrence of pancreatic cancer in patients with autoimmune pancreatitis. In the second project, we investigated the presence of genetics variants associated with chronic pancreatitis in patients with pancreatic cancer.

In the retrospective study of our cohort of patients, we were one of the very first in the world to show occurrence of pancreatic cancer in patients with autoimmune pancreatitis, and as the only one, we have defined the characteristics of such patients. To assess the association of the diseases, we performed a systematic review where we identified all reported cases of coincidence of pancreatic cancer and autoimmune pancreatitis; the incidence of cancer in patients with autoimmune pancreatitis was similar to that of patients with other chronic pancreatitis. Based on these findings, autoimmune pancreatitis might be considered as a risk factor in the etiopathogenesis of pancreatic cancer.

To assess the possible shared genetic susceptibility of chronic pancreatitis and pancreatic carcinoma, we have performed a case-control analysis of 5 selected risk gene loci for chronic pancreatitis in patients with chronic pancreatitis and pancreatic carcinoma. In 4 of the 5 variants studied, we confirmed their significance in the susceptibility to chronic pancreatitis, and we were able to rule out the significant overlap of common susceptibility loci (i.e., loci with high frequency in the general population) between chronic pancreatitis and pancreatic cancer.