CASE REPORT

A Rock in the Belly: Medicine is not an Exact Science

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Chronic calcifying pancreatitis (CCP) was first reported in 1667 by Regnier de Graaf during the autopsy of a thirty years old male alcohol abuser [1]. Graaf found eight stones in a dilated pancreatic duct, proximally to the papilla of Vater, the pancreas was fibrotic and all side branches were dilated. Almost 200 years later, more precisely, in 1896, Pierce Gould surgically removed pancreatic stones in a patient with pain due to chronic pancreatitis. Pain is the predominant symptom of CCP. Pain can be "neurological" due to compression of nerves or "obstructive", due to occlusion of the main pancreatic duct (MPD) by stones or strictures. In the past 50 years, management of obstructive CCP may also benefit of mini-invasive treatments as endoscopic retrograde cholangio-pancreatography (ERCP), Extracorporeal shock wave lithotripsy (ESWL) and Interventional Endoscopic Ultrasound (IEUS) [2, 3].

Acute relapsing episodes of pancreatitis in patients with chronic pancreatitis are mainly related to MPD obstruction and can lead to pseudocyst formation and infections. Today we know that CCP is directly related to alcohol abuse and smoking, but can also be idiopathic or related to genetic and environmental causes [4, 5, 6].

Stones in CCP can be hard as marble and this is due to their composition: carbon salts, phosphorus or magnesium salts, and organic matter [7]. Endoscopic treatments relieve pain and solve sepsis through MPD clearance and/or drainage of collections. MPD strictures are solved with multiple pancreatic plastic stents placement and exchanges. These treatments usually last one year. However, inflammation leads to fibrosis of the pancreatic parenchyma and this process is irreversible. Adipose-derived mesenchymal stem cells have been applied in pre-clinical studies in rats with chronic pancreatitis and the results are encouraging and human studies are attended [8].

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We present here the case of a 41 years old patient with CCP and at least twenty years history of chronic alcohol abuse and smoking. The patient had MPD cephalic stricture and cephalic occluding stones. Over two years of treatment in our unit the patient had multiple ESWL's with MPD stones fragmentation, multiple ERCP's with stones extraction, and plastic stents exchanges for cephalic MPD stricture. He also had one IEUS with metal stent placement for a 6 cm infected pseudocyst at the level of the pancreatic head. Various CT-scans showed hundreds of stones in almost all secondary ducts of the pancreas. Finally, the last X-ray image before definitive pancreatic stent removal showed a "petrified pancreas". Interestingly, after two decades of alcohol and smoke abuse, after multiple endoscopic interventions, and with evidence of a "petrified pancreas", the patient had no clinical nor laboratory signs of exocrine or endocrine pancreatic insufficiency. In particular, blood glucose and insulinemia levels were within normal ranges, and he had no signs of steatorrhea.

In the past five centuries, the pancreas has been in the center of interest of many scientists, and a lot of discoveries and progress have been done in understanding the mechanisms of CCP. After all, when we face with incredible clinical cases like this one, it seems that only the tip of the iceberg has been discovered.

Conflict of interest

There is no conflict of interest.

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