Case Report

Shifting pancreatic enlargement in a patient with autoimmune pancreatitis

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SUMMARY

Autoimmune pancreatitis is reported to account for approximately 5% of all causes of chronic pancreatitis. Herein, we describe a patient with Sjogren's syndrome, who had been diagnosed with pancreatic cancer three years earlier, but had declined any surgical intervention. The presence of Sjogren's syndrome, the benign course over the ascending three years, the elevated serum IgG4 with a subsequent decline after therapy and a normalization of pancreatic size following glucocorticoid therapy are all suggestive of autoimmune pancreatitis. Recognition of this clinical entity may save patients from unnecessary surgery.

INTRODUCTION

Autoimmune or sclerosing pancreatitis is a rare form of chronic pancreatitis that usually occurs in patients with other autoimmune diseases. Due to appearances compatible with pancreatic cancer on imaging procedures, many of these patients undergo unnecessary surgery. An increase in the serum IgG4 subclass of immunoglobulin IgG has been suggested as a sensitive, specific and non-invasive means of making the diagnosis. A course of glucocorticoid therapy has been shown to induce clinical remission and a decrease in serum concentrations of IgG4.[1, 2, 3] Herein, we describe a patient with Sjogren's syndrome who declined pancreatic surgery that was recommended three years ago for a mass of the tail of the pancreas. In the intervening three years, a shift in pancreatic enlargement from focal (initially involving the tail and later the body of the pancreas) to diffuse was noticed on consecutive imaging studies. The shifting of pancreatic enlargement over time is a feature worth reporting as, to our knowledge, it has not been described before.

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CASE REPORT

A 68-year-old man was admitted to the hospital in August 2004 with a two days history of abdominal pain, flatulence and diarrhea. His past medical history was remarkable for xerostomia attributed to Sjogren's syndrome. This diagnosis was further confirmed in April 2001 by lip biopsy (Stage 3+, by Tarpley's staging). In June 2001, he was evaluated in another hospital for abdominal pain. Imaging by computed tomography (CT), magnetic resonance cholangio-pancreatography (MRCP) and endoscopic retrograde cholangio-pancreatography (ERCP) (6/2001) re-

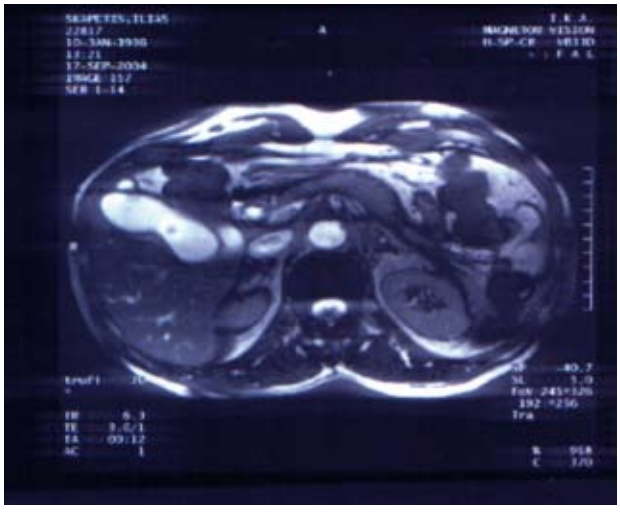

Figure 1. MRCP in 2004, before the initiation of corticosteroid therapy, showed pancreatic enlargement and stenosis of the main pancreatic duct.

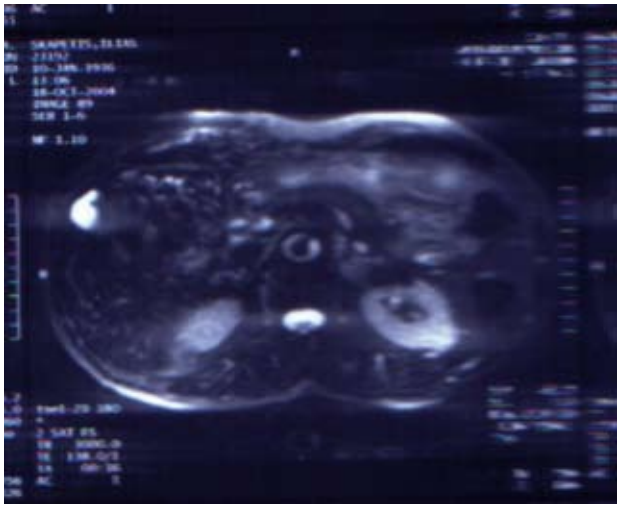

Figure 2. MRCP four weeks after corticosteroid treatment showed normalization of the size of the pancreas and the main pancreatic duct.

vealed a mass of the tail of the pancreas with interruption of the lumen of the main pancreatic duct. Findings were considered highly suggestive of pancreatic cancer, but the patient declined pancreatic surgery. A repeat abdominal MRI exam in January 2004, showed that the enlargement had shifted from the tail to the body of the pancreas.

In the follow-up of the patient, we observed a cholestatic liver disfunction (SGOT=412 mg/dl, SGPT=537 mg/dl, gGT=237mg/dl, ALP=460 mg/dl, BIL=6.01 mg/dl) and that the levels of IgG4 subclasses were elevated (IgG4=413 mg/dl). The CT revealed a diffuse enlargement of the pancreas, whereas the ERCP and the MRCP showed an irregular stenosis of the main pancreatic duct. The patient was given oral prednisolone 40 mg/day for four weeks. After the completion of four weeks' treatment with prednisolone, a repeated MRCP was performed that revealed a significant reduction of the pancreatic enlargement and a normal caliber of the main pancreatic duct. Oral prednisolone was also effective in the reduction of the IgG4 levels (175 mg/dl four weeks after oral prednisolone). Two months after the initiation of prednisolone, the biochemical parameters of the patient had returned to normal (SGOT=16 mg/dl, SGPT=42 mg/dl, gGT=40 mg/dl, ALP=126 mg/dl, BIL=0.33 mg/dl).

DISCUSSION

The concept of pancreatitis associated with hypergammaglobulinemia was originally postulated by Sarles *et al* in 1961.[4] However, only in the last 10 years has this clinical entity been firmly established in the list of diseases affecting the pancreas and thus appropriately gained significant attention. With mounting evidence suggesting an underlying autoimmune mechanism, the term autoimmune pancreatitis was originally introduced by Yoshida *et al* in 1995.[5] Despite the increasing cases of autoimmune pancreatitis being reported around the world, its true prevalence and incidence have yet to be determined. Three case series have reported prevalence rates of 4% to 6% of all patients diagnosed with chronic pancreatitis.[6, 7] The mean age of diagnosis is 55, this however can vary with cases presenting from 30 to 70 years of age.[8]

The autoimmune mechanisms that contribute to the pathogenesis of this disorder are not clear. The hypergammaglobulinemia and particularly the increased levels of IG4 are very frequent. An increase of IgG4>135 mg/dl is reported to have 90% sensitivity and 99% specificity for the diagnosis of the disease.[1] Autoimmune pancreatitis is also characterized by the presence of autoantibodies such as: antinuclear antibody (ANA), antismooth muscle antibody (ASMA), antilactoferin antibody (ALA), anticarbonic anhydrase II (ACA II), rheumatoid factor (RF), antineutrophil cytoplasmic antibody (ANCA).[9] The histopathological examination of the pancreas shows fibrotic changes and an intense inflammatory cell infiltration which consists mainly of lymphocytes (CD8, CD4 positive T-lymphocytes with B-lymphocytes to a lesser degree), but also contains neutrophilic and eosinophilic granulocytes and some macrophages.[1]

Patients with autoimmune pancreatitis present with a wide variety of symptoms, but severe abdominal pain or acute pancreatitis is unusual.[1] In a large series, 63% of patients had jaundice and 35% had abdominal pain.[6]

Imaging features may indicate focal or diffuse enlargement of the pancreas at endoscopic US, CT, and MRI and focal, segmental or diffuse narrowing of the main pancreatic duct at ERCP or MRCP.[10, 11] Though the diffuse form is the most commonly reported in the literature, focal forms have been described by a few researchers.[12] In a recent study, the diffuse form, as seen at CT and endoscopic US, was more common than was the focal form.[10] The patient that we have described apparently had a focal form of autoimmune pancreatitis with a documented mass of the tail of the pancreas that shifted to the body of the pancreas during the ascending three years and finally had turned to a diffuse form of autoimmune pancreatitis.

The original diagnosis of autoimmune pancreatitis requires the presence of diffuse enlargement of the pancreas

and diffuse or segmental irregular narrowing of the main pancreatic duct. Supporting criteria include elevated levels of IgG and/or IgG4, the presence of autoantibodies and consistent histopathologic findings.[13]

Glucocorticoid therapy induces clinical remission, normalization of the size of the pancreas and the main pancreatic duct and significantly decreases serum concentrations of IgG4.[14, 15] Although the vast majority of patients with autoimmune pancreatitis readily respond to corticosteroids within a few weeks, a small subgroup may require maintenance therapy with 5 or 10 mg of prednisone per os daily.[16]

CONCLUSIONS

We have reported a case of an old man with Sjogren's syndrome and autoimmune pancreatitis with shifting enlargement of the pancreas. The recognition of the disease is important because it can save patients from unnecessary surgery due to misdiagnosis of pancreatic cancer.[17]

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