CLINICAL VIGNETTE

Autoimmune Pancreatitis

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Case Presentation

A 75-year-old male with recently diagnosed diabetes mellitus was seen for several months of progressively worsening loss of appetite, early satiety, and unintentional weight loss of 30 lbs. He also noted new enlarged right inguinal lymph node and fatigue. He had no abdominal pain or jaundice. His physical exam showed right inguinal lymphadenopathy but otherwise normal without hepatosplenomegaly, abdominal tenderness, jaundice or rash. His CBC, LFT, amylase and lipase were normal. The IgG levels were elevated with IgG4 of 2410 (normal 1-124). CT scan showed "Diffuse uniform enlargement of the pancreas with a sausage-like appearance and a surrounding hypo-attenuating halo. Multiple bilateral borderline external iliac and common iliac lymph nodes." The patient was evaluated by the interventional endoscopy service and given that the clinical presentation was highly suggestive for autoimmune pancreatitis, pancreatic biopsy was not performed. The patient was started on oral prednisone 40 mg daily for 4 weeks, then tapered down by 5 mg daily every 5 days. He returned two months later on low dose prednisone with normal appetite and resolution of unintentional weight loss. His IgG level decreased to 1110, and MRI at that time showed "Interval resolution of autoimmune pancreatitis and previously prominent retroperitoneal nodes. Findings compatible with treatment response." He eventually successfully weaned off prednisone. The IgG4 level also essentially normalized.

Discussion

Autoimmune pancreatitis (AIP) is a rare pancreatic disorder that has been associated with immune-mediated diseases.[1,2] AIP is classified into two groups: Type 1 AIP is characterized by systemic IgG4-positive disease affecting the pancreas, and type 2 AIP, features granulocytic lesions in the pancreas, without system-wide involvement. Systemic IgG4-positive disease is characterized by variable elevation in levels of IgG4 in the serum, and IgG4 rich lymphoplasmacytic infiltration in multiple organs. In addition to affecting the pancreas, IgG4 related systemic disease can involve the biliary tree, salivary glands, retroperitoneum, lymph nodes and kidneys.[2] Hallmark changes in the pancreas include pancreatic enlargement and narrowing of the pancreatic duct in a diffuse and irregular fashion.[3]

Most patients with IgG-4 related disease present sub-acutely with variety of manifestations in the pancreas and biliary tract. It may take months to years for the disease to become evident in other systems.[4] Type 1 AIP typically manifests at an older age than type 2 AIP. Typical presenting symptoms include obstructive jaundice and abdominal pain and patients may also present with biochemical evidence of pancreatitis. Obstructive jaundice was the presenting symptom in 75% of patients with type 1 AIP compared with type 2 AIP, which had majority of patients (68%) presenting with abdominal pain in one large cohort study.[5] Abdominal pain is not necessarily associated with acute pancreatitis.

Type 1 AIP can often be diagnosed without histology, but type 2 requires a tissue specimen to make the diagnosis.[6] Characteristic features of AIP include dense lymphoplasmacytic infiltrates, particularly periductal, storiform fibrosis; obliterative phlebitis (always present in the pancreas and submandibular glands), and abundant IgG4 positive plasma cells (>10 cells/HPF).[4,6] Pancreatic abnormalities are found on imaging in up to 85% of patients with AIP.[2] Typical findings include diffuse parenchymal enlargement with delayed enhancement. Rim-like enhancement can sometimes be seen.[1] The Mayo Clinic (HISORt) criteria, utilizes a combination of characteristic findings on histology, imaging, serology, other organ involvement and response to steroid treatment to diagnose AIP.

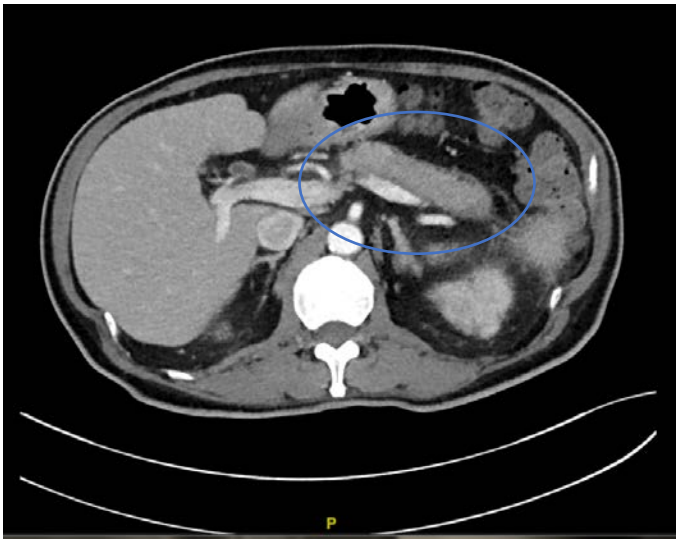
A diagnosis of pancreatic adenocarcinoma must be ruled out before pursuing an AIP diagnosis.[5] Elevated IgG4 levels are more often seen in type 1 AIP. Levels greater than twice the upper limit of normal is consistent with level 1, while IgG4 levels of 1-2x the upper limit of normal satisfy criteria for level 2 from international consensus diagnostic criteria.[6]

Treatment of AIP typically involves steroids. One-half to two-thirds of AIP patients responded to glucocorticoids in 2 to 16 weeks.[7] IgG4 levels, LFTs, and CT/MRI scans can be used to follow patients' response. Up to 25% of AIP patients require a second course of treatment and a smaller proportion require continuous treatment with glucocorticoids. In patients who develop relapse despite glucocorticoids, 6-mercaptopurine, rituximab, cyclosporine, or cyclophosphamide have been used with limited success.[8]

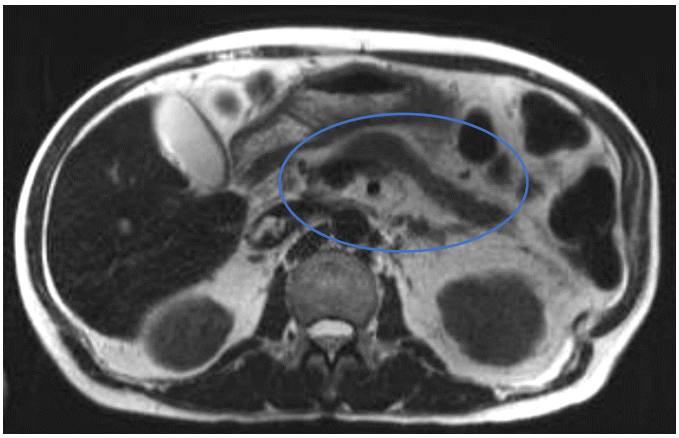
Conclusion

AIP is an infrequently recognized autoimmune disease that can present both as a primary pancreatic disorder or as part of a systemic IgG4-postive autoimmune diseases. Revised Mayo

HISORt criteria is often used to diagnose AIP. The majority of AIP patients initially respond to glucocorticoids, but many require multiple courses of glucocorticoids or immunomodulators. If the patient has poor response to both glucocorticoids and immunomodulators, a different diagnosis should be considered.



CT scan of pancreas prior to treatment.


MRI scan of the pancreas 2 months after the treatment.

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