Autoimmune pancreatitis: CT and MR findings before and after corticosteroid treatment
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Section: Abdominal imaging
Case Type: Clinical Cases
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Patient: 58 years, male

Clinical History:
Abdominal pain, nausea, vomiting, and jaundice.

Imaging Findings:
The patient was referred to our Institution because of continuous epigastric pain, nausea and vomiting since two months. A week ago the patient had developed an obstructive jaundice. Serum amylase level was normal. Abdominal CT (Fig 1) after intravenous iodinated contrast injection showed a diffusely enlarged pancreas with homogeneous enhancement. A capsule-like low-attenuation rim secondary to peripancreatic edema surrounded the pancreas. The biliary tree was dilated and the common bile duct showed wall-thickening and mural enhancement. An additional MR cholangiopancreatography (Fig 2) demonstrated a diffusely enlarged pancreas with minimal high signal intensity on T2-weighted MR and homogeneous enhancement after gadolinium injection. Diffuse narrowing of the main pancreatic duct was observed. The suprapancreatic biliary tree was dilated, while the intrapancreatic biliary duct was narrowed. In accordance with the imaging findings and clinical features the patient was treated with corticosteroids. A CT examination one month after treatment was normal (Fig 3).

Discussion:
Chronic pancreatitis caused by an autoimmune mechanism has been variably termed as primary sclerosing pancreatitis, lymphoplasmacytic sclerosing pancreatitis, nonalcoholic duct-destructive chronic pancreatitis, or autoimmune pancreatitis. This entity is relatively new, has been increasingly recognized, and has specific pathologic features. Most of the patients show serum markers of autoimmune disorders, such as increased IgG and antinuclear antibody levels (normal levels not exclude the diagnosis). In the present case autoimmune markers were within normal limits. Clinical features are nonspecific and include epigastric pain, fatigueability, and jaundice. Imaging is usually performed to determine the cause of jaundice. Though the diffuse form is the most commonly reported in the literature, focal forms have been described as well. In the diffuse form the pancreas is mildly enlarged (sausage shaped) and shows a homogeneous attenuation, moderate enhancement, sharp borders with absence of normal pancreatic clefts, and a peripheral rim of hypoattenuation that possibly represents inflammatory exudates. Biliary and pancreatic ductal abnormalities include focal or diffuse strictures at endoscopic retrograde cholangiopancreatography or MR cholangiopancreatography; there is minimal wall thickening. The involvement of the main pancreatic duct is characteristic. The diagnosis of autoimmune pancreatitis can be established based on imaging and on immunological analysis and treated with corticosteroids. In the absence of a supporting history and serologic marker levels, a focal form of autoimmune pancreatitis may be extremely difficult to differentiate from
pancreatic cancer on the basis of imaging features alone.

**Differential Diagnosis List:** AUTOIMMUNE PANCREATITIS. COMPLETE RESPONSE AFTER CORTICOSTEROID THERAPY.

**Final Diagnosis:** AUTOIMMUNE PANCREATITIS. COMPLETE RESPONSE AFTER CORTICOSTEROID THERAPY.

**References:**


Figure 1

Description: Enlarged pancreatic head with homogeneous contrast enhancement. Origin:

Description: Diffusely enlarged pancreas with a peripheral hypodense rim. Origin:
Figure 2

**a**

**Description:** Coronal T2 SSFSE Shows a diffuse enlargement of pancreatic head with biliary duct narrowing at pancreatic level. **Origin:**

**b**

**Description:** MR Cholangiopancreatography: Biliary tree dilated up to intrapancreatic choledoco. Pancreatic duct is diffusely collapsed. **Origin:**
**Description:** Axial T2 FSE-FS: pancreas diffusely enlarged and slightly hyperintense. Hyperintense peripancreatic rim. No edema or peripancreatic fluid collections were detected. **Origin:**
Description: Pancreas with normal size and morphology. Origin:
Description: Pancreas with normal size and morphology. Origin: