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Clinical Image

MRI Findings in Autoimmune Pancreatitis and Cholangitis

Ouijdane Zamani[1]* and Rachida Saouab[2]

[1]*Faculty of Medicine and Pharmacy of Rabat, Mohammed V University, Morocco*
[2]*Faculty of Medicine and Pharmacy of Marrakech, Cadi Ayyad University, Morocco*

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Corresponding author

Ouijdane Zamani, Radiology Unit, Mohammed V Military Teaching Hospital, Rabat-Morocco, Tel: 0667094963; Email: ouijdanezamani@gmail.com

Clinical Image

A 52-year-old nonalcoholic man, with no medical history, presented to our hospital with epigastric pain, jaundice and 5 kg weight loss. Vital signs were stable. Serum analyses revealed an elevated total bilirubin, direct bilirubin, aspartate aminotransferase (AST) alanine aminotransferase (ALT) and a normal level of lipase (35u/L). Ultrasound examination showed moderately dilated intrahepatic and extrahepatic bile ducts with enlarged and heterogeneous head of the pancreas. Magnetic resonance imaging revealed diffuse parenchymal enlargement with effacement of the lobular contour of the pancreas and a capsule like was noted as a halo which is hypo intense on both T1 and T2-weighted images (Figure 1). The Common Bile Duct (CBD) wall showed an enhancement during the late phase of contrast (Figure 2) consistent with cholangitis. On MRCP there was a mild dilatation of the intrahepatic bile ducts and a regular distal CBD stricture (Figure 3). Therefore the diagnosis of autoimmune pancreatitis was suspected and a dosage of IgG4 antibody was requested and returned high. The patient was started on high-dose prednisone with significant improvement in his symptoms (Figures 1-3).

Autoimmune pancreatitis (AIP) was first described by Yoshida et al., [1] in 1995, as a form of chronic pancreatitis associated with autoimmune manifestations. It is a rare but important differential diagnosis from pancreatic cancer (PC) [2]. The disease can occur as alone or in association with autoimmune disorders including sclerosing cholangitis, rheumatoid arthritis, primary biliary cirrhosis, inflammatory bowel disease, hypothyroidism, sarcoidosis, and Sjogren's syndrome [3]. AIP is a form of chronic pancreatitis characterized by frequent presentation with obstructive jaundice, simultaneous or metachronal occurrences of extra pancreatic lesions, histology of lymphoplasmacytic infiltrates with fibrosis, and a dramatic response to corticosteroids [4]. AIP is also known by other names including lymphoplasmacytic sclerosing pancreatitis with cholangitis, idiopathic duct destructive pancreatitis, primary inflammatory pancreatitis, non-alcoholic duct destructive chronic pancreatitis. Clinical features and biological data often resemble those of pancreatic cancer. This is why the differential diagnosis must be carried out carefully [5]. The imaging characteristics of CT and MR are essential for retaining the diagnosis of AIP and ruling out other potential etiologies, particularly pancreatic cancer. Imaging data that is relatively specific to AIP include diffuse pancreatic hypertrophy, the presence of a hypo attenuating capsule edge, and delayed parenchymal enhancement [6]. The most frequent extra-pancreatic lesions occur in the biliary tree with asymptomatic liver test abnormalities or jaundice [7]. On imaging, biliary involvement commonly appears as multifocal biliary strictures similar to primary sclerosing cholangitis. Enhancement of the common biliary duct wall may be present in patients with AIP as

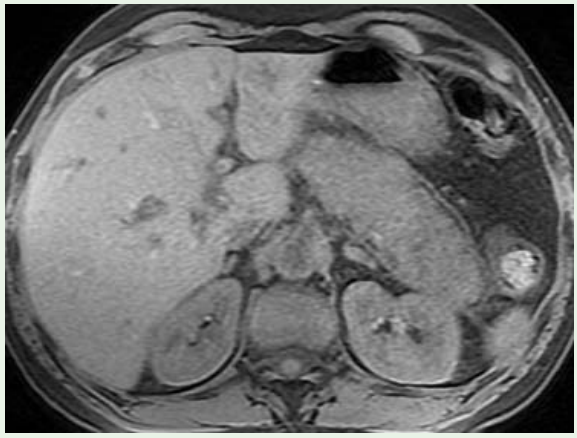

Figure 1: T1-weighted axial MR image showed the hypo intense halo.

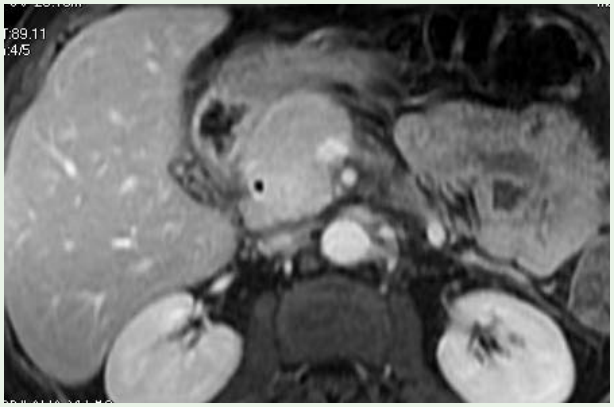

Figure 2: T1 enhanced axial MRI showing the enhancement of the CBD wall.

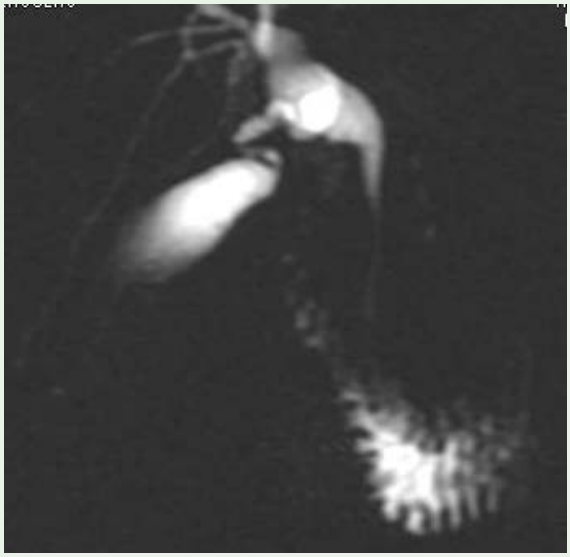

Figure 3: Magnetic Resonance Cholangio Pancreatography (MRCP) imaging study showed mild dilatation of the intrahepatic bile ducts with regular stricture of the CBD.

it has been the case in our patient. The most sensitive and specific serum markers for AIP type 1 are IgG4 (≥ 135 mg / dL, sensitivity: 86%, specificity for AIP against PC: 96%), their level is elevated in AIP type 1 and normal in AIP type 2 [8]. AIP can be treated with steroids and does not require surgery. Because of the similar characteristics with pancreatic cancer, sometimes unnecessary surgical resection is performed. In these cases, the lymphoplasmacyticin filtrate characteristic of AIP has been observed in about 1/3 of the cases making it possible to correct the diagnosis [9].

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