Autoimmune pancreatitis revisted : MR imaging characteristics and differentiating features from pancreatic carcinoma

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PURPOSE/AIM: Autoimmune pancreatitis (AIP) is a form of focal pancreatitis that is frequently misdiagnosed by imaging as a neoplastic process. The soft tissue capabilities of magnetic resonance imaging (MRI) provide detailed analysis of inflammatory processes, which may allow for a more accurate diagnosis of AIP. This educational exhibit will highlight specific MR imaging features of AIP, associated clinicopathologic findings, and provide guidelines for distinction from carcinoma.

CONTENT ORGANIZATION: Auto-tutorial:

Background- 1) Review of histopathology & etiologic factors will be done 2) Highlights of current challenges in diagnostic accuracy & misdiagnosis of AIP as pancreatic carcinoma (PCa).

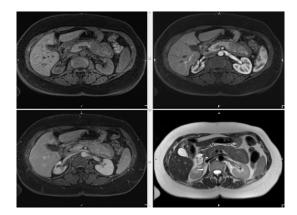
Clinical features & laboratory analysis will discussed.

Imaging methodology- Detailed MRI protocols shall be reviewed. Emphasis will be laid on optimized fat suppression, utilizing spectral adiabatic inversion recovery (SPAIR) technique.

MRI - Extensive array of MR imaging with focus on features most reliable for accurate & confident diagnosis of both focal & diffuse AIP will be highlighted; distinctive findings of AIP from PCa will be stressed. Ancillary findings will also be discussed.

MRI findings will be correlated with histopathologic features

SUMMARY: MRI allows for detailed evaluation of AIP that correlates with histopathologic findings. This educational exhibit will present an overview of these MRI findings and provides a practical guide for image interpretation.



LEGEND: Focal AIP in pancreatic tail: a) Axial T1WI precontrast image shows heterogeneous bulky tail of pancreas b). Well-demarcated heterogeneous enhancement is seen in the tail in contrast to normal avid enhancement in head pancreas on late arterial phase; note also the hypointense peripancreatic halo. c) Delayed enhancement of tail and fibro-inflammatory tissue is seen on delayed phase images. d) Axial ssT2WI show focal heterogeneous signal in pancreatic tail with hypointense peripancreatic fibro-inflammatory reaction.