Diagnostic Challenge: Paraduodenal Pancreatitis: MR Imaging Characteristics, Differential Diagnosis and Histopathological Correlation

Pardeep Mittal, William Small, Juan C Camacho, Kiran K Maddu, Volkan Aksay, Burcu Saka, Courtney C Moreno, and Bobby Kalb

1Radiology and Imaging Sciences, Emory University School of Medicine, Atlanta, Georgia, United States, 2Pathology, Emory University School of Medicine, Atlanta, Georgia, United States, 3Diagnostic Radiology, University of Arizona, Tucson, Arizona, United States

Purpose:
• To demonstrate MR Imaging characteristics of paraduodenal pancreatitis differentiating from pancreatic adenocarcinoma.
• To educate participants regarding variety of lesions which mimic paraduodenal pancreatitis such as chronic pancreatitis, pancreatic adenocarcinoma, ampullary carcinoma, giant cell reaction, Bruner gland hyperplasia etc.
• To evaluate accuracy of MR Imaging with and without contrast medium along with MRCP techniques to identify paraduodenal pancreatitis and its differential diagnosis.

Methods: Patient undergoing MR examination for diagnostic work of abdominal pain and jaundice lesions causing obstruction of pancreatic duct and bile ducts were included in this educational presentation. Dedicated abdominal MRI of the abdomen including MRCP with and without contrast medium was performed and evaluated for specific features of paraduodenal pancreatitis like focal thickening and abnormal enhancement of second part of duodenum along with cystic changes in the expected location of accessory pancreatic duct to differentiate from its mimics such as adenocarcinoma of pancreas and correlated with post-operative histopathological findings.

Discussion: Paraduodenal pancreatitis is a rare form of chronic pancreatitis which affects groove between the head of pancreas and second portion of duodenum commonly seen in setting of chronic alcohol consumption. Progressive inflammation in the duodenal wall can lead to stenosis and fluid filled duodenum can be seen. Paraduodenal pancreatitis can lead to dilatation of both bile and pancreatic ducts similar to adenocarcinoma.

Conclusions: Contrast enhanced MRI may help accurately identify paraduodenal pancreatitis from entities having similar characteristics such adenocarcinoma etc. and aid in therapeutic decisions.

References:
