Role of secretin enhanced MRCP in post partial pancreatectomy patients.

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OBJECTIVE: The purpose of this study is to assess the role of secretin-enhanced MRCP in the evaluation of patients following partial pancreatectomy.

SUBJECTS AND METHODS: Secretin-enhanced MRCP studies done at our institution from 1/05-7/05 were retrospectively and independently reviewed by 2 readers. Thirteen patients (10 female, 3 male; mean age=45, range=18-74) who underwent partial pancreatectomies (10 Whipple, 1 Frey, 1 Puestow and 1 pancreticojejunostomy with central pancreatectomy) were included in the study. Single-shot fast spin-echo T2-weighted thick slab dynamic MRCP images were reviewed before and every minute (for 10 min) after IV injection of secretin (2mcg/kg body weight of SecreFloTM IV over 1 minute). Image analysis included measurement of the main pancreatic duct diameter in the body and tail, depiction of areas of irregularity and stricturing, and the assessement of the grade of visualization of the main pancreatic duct. The amount of jejunal fluid and visualization of the pancreaticojejunal anatomosis pre- and post-secretin were also documented.

RESULTS: The mean diameter of the main pancreatic duct (MPD) in the body of the pancreas, on the pre- and post-secretin images, was 3.2±1.3 mm and 3.8±1.9 mm for reader 1, and 4±2.0 and 3.9±2.1 for reader 2, respectively ($p>0.1$). The mean diameter of MPD in the tail of the pancreas, on the pre- and post-secretin images was 1.5±1.2 mm and 1.8±1.2 mm for reader 1, and 1.6±1.2 mm and 2.1±1.6 mm for reader 2, respectively ($p>0.1$). For both readers, the number of visualized pancreaticojejunal anastomoses was increased on post-secretin images (9/13 and 8/13, respectively) in comparison with the pre-secretin images (5/13 and 3/13, respectively); however, the differences reached significance only for reader 2 ($p=0.03$). For reader 1 only, the mean grade of jejunal filling was significantly higher on post-secretin (2.3±0.9) images than that on presecretin (1.4±0.7) images ($p=0.02$).

CONCLUSION: The addition of secretin to an MRCP study in the evaluation of post partial pancreatectomy patients didn't significantly impact the visualization of the pancreatic duct. However, secretin may help assess the pancreaticojejunal anastomosis.

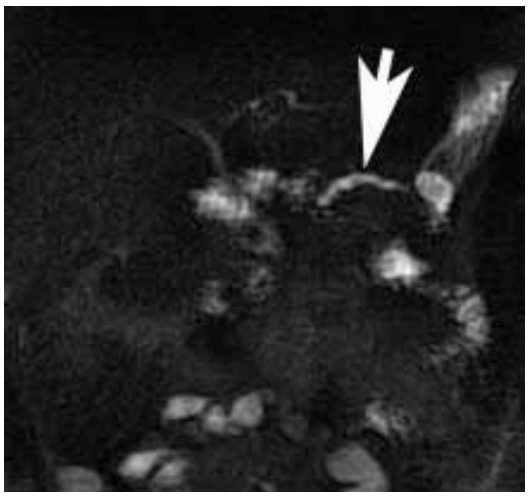

Fig 1: Pre-secretin MRCP image in a patient post Whipple shows mildly dilated pancreatic duct.

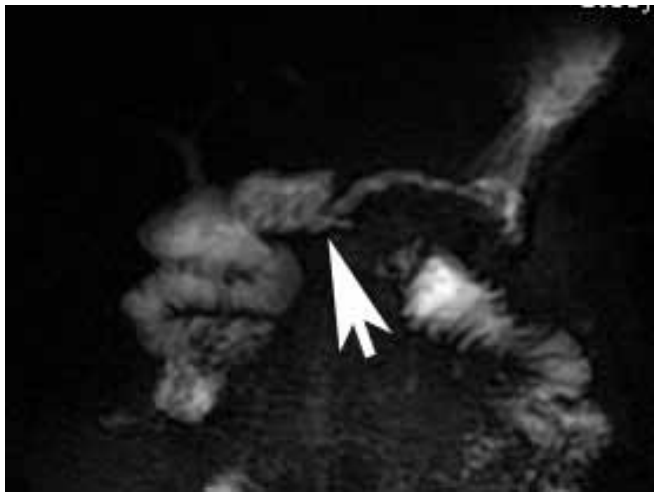

Fig 2: Post secretin dynamic MRCP image shows no significant change in the size of the main pancreatic duct but improved visualization of the pancreaticojejunostomy.