ERCP Post Biliary Reconstruction Applications of Enteroscopy

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Disclosures

- Nothing to disclose relevant to this presentation
Objectives

• Review the different types of biliary reconstruction surgery

• Discuss endoscopic techniques to achieve biliary therapeutics on patients post biliary reconstruction surgery

• Case presentations
Biliary Reconstruction

- Post bile duct injury
- Post liver transplant
- Treatment of neonatal biliary atresia
Types of Bile Duct Injury

• 1. Cystic duct stump leak
• 2. Common bile duct (CBD) injury
• 3. Injury of a sectorial, segmental, or subsegmental duct
• 4. Leakage from the gallbladder bed caused by transection of cystohepatic ducts of Luschka
Biliary Injuries
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Complete transection of CBD
Roux-en-Y reconstruction with hepaticojejunostomy
8 Different Types

• 1. Partial gastrectomy with Billroth II gastrojejunostomy
• 2. Gastrojejunostomy or “bypass” performed for gastric outlet obstruction
• 3. “Standard” Whipple procedure
• 4. “Pylorus preserving Whipple” procedure
• 5. Roux-en-Y gastric bypass performed for obesity
• 6. Roux-en-Y choledochojejunostomy or hepaticojejunostomy
• 8. Total gastrectomy with Roux-en-Y esophagojejunostomy

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Ross A. Endoscopic Retrograde Cholangiopancreatography in the Surgically Modified Gastrointestinal Tract Gastrointest Endosc Clin N Am 2009
Challenges

• Reaching ampulla or biliary-enteric anastomosis
• May have to traverse several anastomoses
• Surgery not always done with endoscope in mind (180 degree turns)
• Accessory length limited in many markets
Techniques

• Double and single balloon enteroscopes use “push, hook and pull” to advance and reduce intestinal loops

• Spiral overtube pleats intestine on overtube allowing access to afferent limb
Reaching the JJ Anastomosis

• Usually ‘shotgun’ appearance
• Blind loop next to efferent limb
• Afferent limb usually on retroflexion
Jejuno-Jejunostomy
Intubate Proximal Limb

- If many loops forming, likely efferent limb
- It may contain bile, but will not lead to promise land...
- Tattoo and withdraw scope to JJ anastomosis
- ‘U turn’ as soon as entering JJ anastomosis then done

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Once Ampulla or HJ Anastomosis Found

- Cannulate with regular cannula if using colonoscope
- Prepare for case with appropriate accessories if using enteroscope
- Dilation, stone extraction etc...
Literature Review

• Several small series, varying success with double-balloon enteroscope

• Shorter times with experience, usually around 45 minutes

• Reports of advancing duodenoscope over wire placed with colonoscope

• In North America more date being accrued with GBP patients

Roux-en-Y reconstruction with hepaticojejunostomy
Video Examples
QuickTime™ and a
H.264 decompressor
are needed to see this picture.