

# SpyGlass™ Discover Digital Catheter

## Technique Spotlight: Utilization in Patients with Modified Hutson Loops in Interventional Radiology

### Presented by:

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### Patient history:

- 74-year-old man with liver transplant for PSC.
- Elevated alkaline phosphatase and bilirubin concerning for obstructive process.
- Interventional Radiology was consulted for management.

### Successful case of endoscopy/cholangioscopy to:

- Find the biliary-enteric anastomosis or anastomoses.
- Evaluate the stricture.
- Remove the plastic stents.

## Percutaneous Transjejunal Access for Biliary Interventions

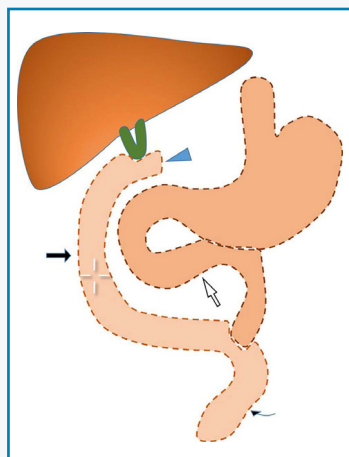


Figure 1.

**Figure 1.** Diagram shows the modified Hutson loop anatomy. The afferent limb (Roux limb/biliary (black arrow) extends from the liver to the efferent limb (open arrow/curved arrow). The blue arrowhead points toward the blind ending loop of the afferent limb. The radio-opaque markers (4 short white lines) represent the surgically affixed portion of the afferent limb, termed the modified Hutson loop.

### Percutaneous Access of the Modified Hutson Loop for Retrograde Cholangiography, Endoscopy, and Biliary Interventions

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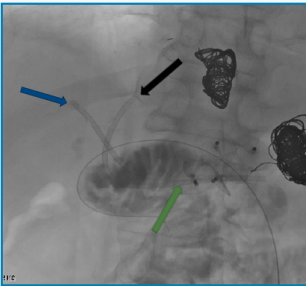
## Initial Biliary Stent Placement:

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- Under general anesthesia, percutaneous transjejunal access was obtained.
- Endoscopy was used to identify the biliary-enteric anastomosis.
- Cholangiography and cholangioscopy demonstrated:
  - Moderate stenosis at the hepaticojejunostomy.
  - No definite strictures in the intrahepatic biliary ducts were identified. This most likely represents an anastomotic stricture.
- Cholangioplasty was performed.
- Two 8.5Fr plastic biliary stents were placed.

### Initial Biliary Stent Placement

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- Modified Hutson Loop with two 8.5Fr stents through the hepaticojejunostomy
  - Biliary Stent left hepatic (Black Arrow)
  - Biliary Stent right hepatic (Blue Arrow)
  - Biliary Stents ending in Roux limb (Green Arrow)

### Follow-up Cholangiogram/Cholangioscopy

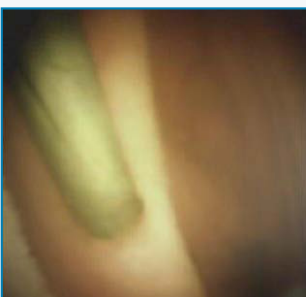
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- ERCP would be very difficult due to the long Roux limb.
- A 12Fr braided sheath was placed in the modified Hutson loop.
- The scope allowed placement of a wire into the biliary system via the hepaticojejunostomy.
- The SpyGlass™ Discover Digital Catheter placed through a small sheath provided an opportunity to remove the stent using a snare as seen on the video.
- Once stents were removed, the scope was used to evaluate the stricture.

### Follow-up Cholangiogram/Cholangioscopy

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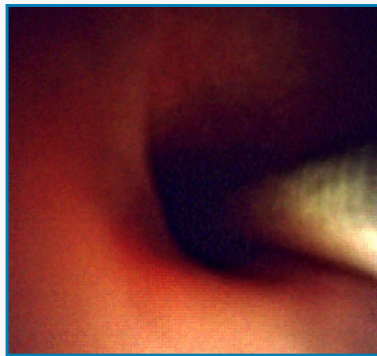


Plastic stent end seen in the bowel. The 4-way deflection improves identifying the end of the stent (which may be embedded in the bowel wall) and subsequent snaring.

## Follow-up Cholangiogram/Cholangioscopy



Balloon occlusion cholangiogram.



View of the bile duct with a safety wire.



Cholangiogram demonstrating patent anastomosis.

## Benefits of SpyGlass™ Discover Digital Catheter

### How SpyGlassDiscover impacted the case:

- 4-way deflection
  - Allows elevation of the end of the stent for quicker snaring/removal of stents.
  - 90 degree turn in one direction with an additional deflection in another plane allowed for visualization of anatomy/pathology and snaring of the stent. This is also easier on the wrist than an endoscope with 2-way deflection.
- Dedicated irrigation channels
  - Allows for better visualization of bile ducts and anastomosis.
  - The irrigation channels impacted the case by removing debris from the view of the scope allowing for a clean look at the biliary system.
- Image transmitted on screen next to fluoroscopic images
  - SpyGlassDiscover Digital Catheter has the ability to integrate with multiple video platforms. We can now view images in a split-screen format instead of having to focus on multiple screens.
  - The ergonomic stress on the neck and corresponding eye stress increases the physical and psychological toll of a case. Having all the imaging on one screen decreased stress on the neck and eyes.

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This case study was produced in cooperation with Dr. Ahsun Riaz. Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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