



Overcoming Complex Distal Biliary Obstruction: **SpyGlass™-guided EHL and SpyBite™ Biopsy with EXALT™ Model D**

Patient history and background information

A 59-year-old male with a past medical history significant for hyperlipidemia, hypertension, type 2 diabetes mellitus, and hypothyroidism presented with abdominal pain and jaundice. Initial laboratory evaluation demonstrated a cholestatic and hepatocellular pattern of liver injury, including a total bilirubin of 6.3 mg/dL, alkaline phosphatase of 159 U/L, AST of 186 U/L, ALT of 213 U/L, and lipase of 183 U/L. A CT scan of the abdomen and pelvis was performed and revealed findings suggestive of a 4.0 × 1.2 × 1.3 cm soft tissue mass with a nodular appearance at the level of the distal common bile duct, raising concern for a malignant biliary obstructive process.

Procedure / techniques used

SpyGlass-guided cholangioscopic evaluation of the biliary stricture was performed [Figures 1-5, page 2], which revealed the full extent of the strictured area and the corresponding abnormal tissue [Figure 6, page 2].

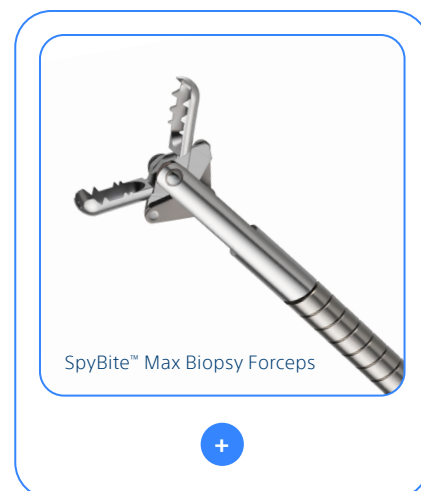
Procedure / techniques used continued onto page 2



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Procedure / techniques used (continued)

The EXALT™ Model D Single-Use Duodenoscope was used for its torque control and distal stability, allowing for maintenance of endoscopic position during SpyGlass™-guided cholangioscopy.

Importantly, the ability to perform EHL without loss of scope position enabled adequate clearance of intraductal debris, [Figures 7-9] revealing a malignant-appearing distal biliary stricture with abnormal mucosa characterized by fibrosis and a frond-like appearance. This was critical for both visualization and targeted tissue acquisition using SpyBite™ Max Biopsy Forceps [Figures 10, 11].

Outcome

Biopsy specimens were immediately processed into smash preparations, confirming adequate cellularity and the presence of malignant cells, thereby establishing a tissue diagnosis during the index procedure.

Device impact

The ability of the EXALT™ Model D Single-Use Duodenoscope to provide stability and precise torque control not only facilitated the clearance of large stone debris that could not be removed with balloon sweeps, but also enabled clear visualization of the target lesion, allowing for efficient tissue acquisition. Additionally, the removal of the substantial stone burden was intended to reduce the potential risk of residual infection, cholangitis, and inadequate tissue sampling.

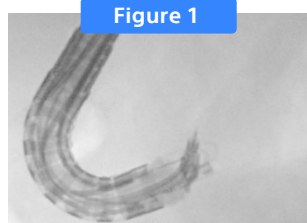


Figure 1

Fluoroscopy demonstrating SpyScope™ DS II positioning with the EXALT Model D Single-Use Duodenoscope for biliary duct access.

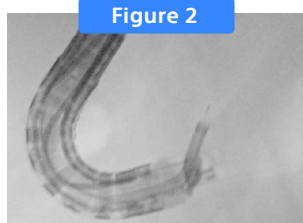


Figure 2

Fluoroscopic image demonstrating the introduction of the SpyScope DS II into the biliary duct.

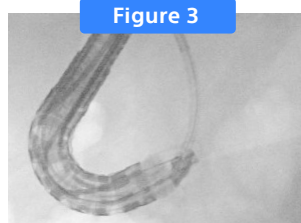


Figure 3

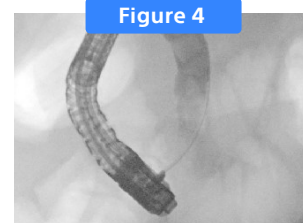


Figure 4

Fluoroscopic image demonstrating the presence of the stricture and choledocholithiasis.

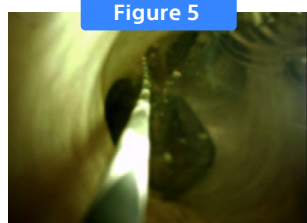


Figure 5

SpyGlass™ DS II Direct Visualization System demonstrating cholangioscopy-guided cannulation at the biliary duct bifurcation.

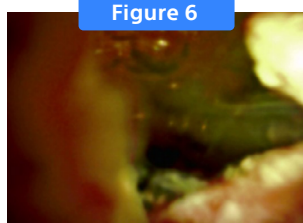


Figure 6

SpyGlass DS II Direct Visualization System confirming the presence and precise location of stones and the suspected abnormal tissue within the biliary duct.

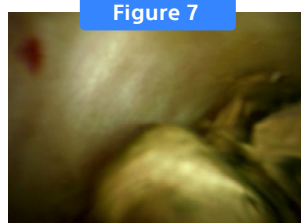


Figure 7



Figure 8

SpyGlass-guided EHL achieving effective clearance of intraductal debris.



Figure 9

Direct cholangioscopic view revealing the intraductal stone with clearly defined surface.



Figure 10

SpyGlass visualization of the target lesion facilitating precise tissue acquisition with SpyBite Max Biopsy Forceps.



Figure 11

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

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