

Novel retrieval basket for the extraction of choledocholithiasis

The management of choledocholithiasis can be a challenging problem depending on the number, size, and location of the stones. Therapeutic endoscopic retrograde cholangiopancreatography (ERCP) has been the standard of care for decades. Various tools and techniques have been used during ERCP including, but not limited to, sphincteroplasty, extraction balloon, mechanical lithotripsy with trapezoid basket, extracorporeal shock-wave lithotripsy, and direct cholangioscopy with lithotripsy. Residual stones may remain even after adequate balloon sweeps and negative occlusion cholangiogram, especially if the bile duct is dilated and stones are small, escaping the balloon sweeps [1]. Direct cholangioscopy has proven to be a useful tool in directly visualizing the ducts for any residual stones in order to achieve complete clearance [2, 3].

The SpyGlass retrieval basket (Boston Scientific, Marlborough, Massachusetts, USA) is one of the new tools that can be used to extract stones found during cholangioscopy. We present a video case of choledocholithiasis in which the SpyGlass retrieval basket was used to extract the residual stones in the bile duct (► **Video 1**).

A 60-year-old woman with no significant medical problems was referred to us for intermittent right upper quadrant abdominal pain and multiple retained choledocholithiasis. She had no symptoms or signs of cholangitis. ERCP was performed. Initial cholangiogram showed a dilated bile duct with multiple small and large filling defects in most of the common bile duct and common hepatic duct, consistent with the presence of stones.



Sphincterotomy was performed and multiple large stones were extracted using a 12-mm extraction balloon catheter. As we suspected retained stones, SpyGlass cholangioscopy was performed, which showed one residual stone in the cystic duct and two residual stones in the left hepatic duct. A SpyGlass retrieval basket was then used and all the stones were extracted.

No adverse events were reported. The patient was discharged home in a stable condition.

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Competing interests

Nirav Thosani is Boston Scientific consultant.

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