

Stent-Through-Stent Bilateral Hilar Drainage for Unresectable Cholangiocarcinoma

A Case Report by Dr. Peter E. Darwin

Case Report

A 68-year-old woman was initially referred for obstructive jaundice and intrahepatic ductal dilation. Her symptoms included progressive anorexia, jaundice, and weight loss. Labs were notable for a bilirubin of 25.9 mg/dL (0.4-1.5 mg/dL) and alkaline phosphatase of 196 units/L (38-126 units/L). MRCP demonstrated a common hepatic duct stricture extending into both the right and left intrahepatic systems. The initial ERCP (see Figure 1) showed a malignant-appearing stricture extending into the main right and left systems with secondary branch involvement (Bismuth II). Intraductal biopsies (Olympus Static Jaw Biliary Biopsy Forceps) showed poorly differentiated adenocarcinoma. Both systems were drained with plastic stents (10 Fr x 12 cm on the right and 7 Fr x 12 cm on the left, see Figure 2). Subsequent PET/CT and surgical evaluation were undertaken, and she was deemed unresectable.

The patient was treated with combined chemoradiation and tolerated both without difficulty. Her LFTs had gradually improved, with a bilirubin nadir of 2 mg/dL. On routine bloodwork three months after the initial ERCP, her bilirubin level rose to 8.1 mg/dL with an alkaline phosphatase of 283 units/L. Repeat ERCP was undertaken after a lengthy discussion with the patient and her family.

Procedure

Under monitored anesthesia, the scope passed without difficulty into the second portion of the duodenum. Both plastic stents remained in position but were occluded. The right-side stent was removed first. Given the prior challenge to drain the left side, we opted to use an Olympus CleverCut3V sphincterotome to pass a 0.035" VisiGlide guidewire through the existing stent into the left system. (See Figures 3 and 4.) A snare was passed over the guidewire and the stent removed, leaving the guidewire in place. A second VisiGlide guidewire was passed into the right system, and a cholangiogram was obtained. Residual bilateral stenosis without proximal dilation was documented.

For drainage, an Olympus X-Suit NIR 8 mm x 4 cm uncoated metal stent was deployed crossing the left takeoff. There was initial difficulty reaccessing the right system through the stent, so an angled tip 0.025" VisiGlide



FIGURE 1

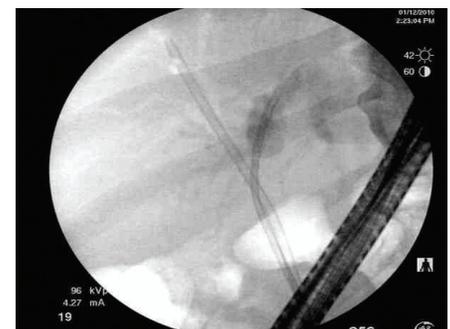


FIGURE 2



FIGURE 3



FIGURE 4

continued on reverse

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guidewire with a torque device and partially bowed sphincterotome were used. The guidewire was passed into the right system, which was confirmed by injection. The tract through the stent was dilated to 4 mm (see Figure 5) and a second X-Suit NIR 8 mm × 4 cm uncoated metal stent was deployed for right-side drainage. (See Figure 6.)

Her serum bilirubin level fell to less than 2 mg/dL and at eight weeks post-deployment, the patient continues to do well clinically.

Discussion

The equipment aided in diagnosis and drainage of this complex hilar malignancy. Initial definitive pathology was obtained by fluoroscopically guided intraductal biopsies. The forceps were opened below the stenosis, then gently pushed until resistance was felt prior to closing. This allowed for added pathologic specimens in addition to standard brush cytology.

For drainage, the CleverCut3V sphincterotome allowed the physician to separate the guidewire port and attach it to the duodenoscope for direct physician wire control. This feature was invaluable in feeling the wire without losing the added benefits of a long-wire platform. The VisiGlide guidewire has a stiff shaft and a hydrophilic tip and was able to traverse both right and left strictures. The angle tip and composition of the 0.025" VisiGlide guidewire made it possible to pass the wire through the open-mesh design of the X-Suit NIR stent for bilateral uncoated metal stent hilar drainage.

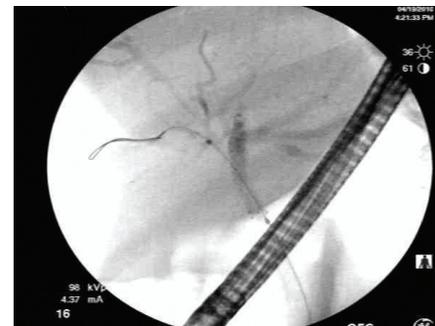


FIGURE 5



FIGURE 6



Peter E. Darwin, MD, FACP

Dr. Darwin serves as the director of GI endoscopy in the Division of Gastroenterology at the University of Maryland in Baltimore. He is an associate professor at the University's School of Medicine and focuses his primary clinical research in therapeutic endoscopy of biliary and pancreatic disease and unsedated endoscopy.

Dr. Darwin is a paid consultant to Olympus America Inc., Medical Systems Group (Olympus). Olympus did not draft, edit, or provide any substantive input on this Case Report.