

Uncovered SEMS (Self-Expanding Metallic Stent) in a Patient with a Stricture Involving the Common Hepatic Duct Bifurcation (Bismuth II)

A Case Report by Dr. Daniel K. Mullady

Case Report

A 62-year-old man with a history of metastatic colon cancer presented with painless jaundice. Cross-sectional imaging revealed multiple scattered liver lesions consistent with metastatic disease and diffuse intrahepatic duct dilation, with obstruction at the common hepatic duct bifurcation (hilar stricture). Endoscopic retrograde cholangiopancreatography (ERCP) was performed to optimize biliary drainage so that the patient could resume chemotherapy.

Procedure

Initial ERCP confirmed a stricture involving the common hepatic duct bifurcation (Bismuth II). Bilateral 10 Fr plastic stents were placed and the patient's jaundice resolved. Despite post-procedure antibiotics, he had two episodes of cholangitis, each requiring stent exchanges within several weeks of the initial ERCP. One of the polyethylene stents had migrated distally and embedded in the duodenal wall opposite the papilla. Two double pigtail 10 Fr stents were placed, but the patient again developed recurrent cholangitis. In addition to recurrent cholangitis, the patient was deemed to not be a surgical candidate. Because of this, the existing 10 Fr plastic stents were replaced with uncovered SEMS.

The plastic stents were removed with a snare. Using an angled 0.025" VisiGlide guidewire through a Multi-3V Plus balloon, the right and left systems were accessed. Cholangiogram again revealed a stricture at the common hepatic duct bifurcation with diffuse dilation of the intrahepatic ducts. (See Figure 1.) A 10 mm × 10 cm Olympus X-Suit NIR biliary stent was then advanced over the guidewire in the left system and deployed such that the proximal end was within the left main duct and the distal end was transpapillary. (See Figure 2.) Using the VisiGlide guidewire in the right system as a guide, the wire in the left system was carefully withdrawn and then advanced through the interstices of the stent into the right system. A second 10 mm × 6 cm X-Suit NIR biliary stent was then placed through the interstices of the first stent to create a "Y" configuration. (See Figure 3.) After stent placement, there was rapid and complete drainage of all injected contrast. Following the procedure, the patient did well and did not have further episodes of cholangitis.



FIGURE 1

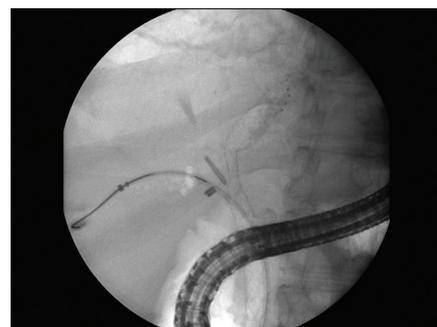


FIGURE 2



FIGURE 3

Uncovered SEMS (Self-Expanding Metallic Stent) in a Patient with a Stricture Involving the Common Hepatic Duct Bifurcation (Bismuth II)

A Case Report by Dr. Daniel K. Mullady

Discussion

Ascending cholangitis secondary to plastic stent occlusion in patients with malignant biliary obstruction is challenging and can be a recurrent problem that does not respond to plastic stent changes. SEMS offer the advantage of longer patency due to their larger diameter. This case demonstrates several advantages of uncovered SEMS over plastic stents in the management of malignant biliary obstruction, and more specifically, several advantages of the Olympus X-Suit NIR biliary stent.

In this patient, the goal was to maintain bilateral drainage. Of the several techniques for bilateral uncovered SEMS placement, the “Y” configuration (stent-through-stent technique) was chosen. The X-Suit NIR biliary stent was chosen because of the unique NIRflex cell design. The stent has wide interstices which easily accommodate placement of a second stent through the first stent. In this case, and with hilar strictures in general, the tip of the stent often needs to make an acute turn into the right and left main ducts, which can be challenging to achieve because of the stiffness of biliary SEMS. The narrow strut rings on the X-Suit NIR biliary stent make it extremely conformable in the duct, allowing for easier advancement over a guidewire across turns in the duct. The narrow strut rings alternate with wide strut rings that provide exceptional radial force. The tapered-tip design allows smooth advancement over the guidewire through strictures and interstices of stents without catching on strut rings. Precise stent placement is possible because there is virtually no foreshortening of the X-Suit NIR biliary stent.

Overall, the Olympus X-Suit NIR biliary stent and NIRflex design offers several attractive features as a biliary uncovered SEMS. Its unique cell design allows for exceptional conformability and radial force with virtually no foreshortening, thus easing the achievement of ideal stent placement. The stent is particularly useful in the management of malignant hilar strictures in which bilateral drainage and a “Y” configuration is desired due to its wide interstices and its conformability in the duct.



Daniel K. Mullady, MD

Dr. Mullady is an assistant professor of medicine in the Division of Gastroenterology at the Washington University School of Medicine in St. Louis, Missouri. His clinical and research interests in diagnostic and therapeutic endoscopy include EUS and ERCP.

Dr. Mullady 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.

Medinol
the engineered

X-Suit NIR, VisiGlide, and Multi-3V Plus are trademarks of Olympus Medical Systems Corp. NIR and NIRflex are registered trademarks of Medinol Ltd. X-Suit NIR is manufactured by Medinol Ltd.

OLYMPUS

OLYMPUS AMERICA INC.

3500 Corporate Parkway, PO Box 610, Center Valley, PA 18034

For more information, contact your local Olympus sales representative, or call 800-848-9024. www.olympusamerica.com/endotherapy

©2011 Olympus America Inc. All rights reserved.
Printed in USA OAIET0111WP7444