

Placement of a New Self-Expanding Metal Stent (SEMS) with a 6Fr Delivery System for Unresectable Malignant Hilar Biliary Obstruction



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technique spotlight

Patient History

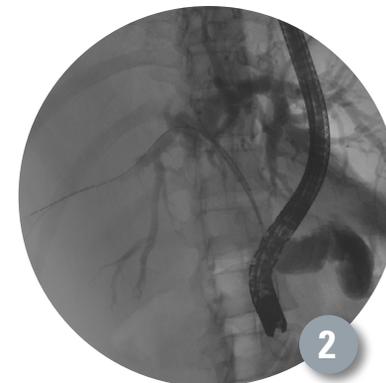
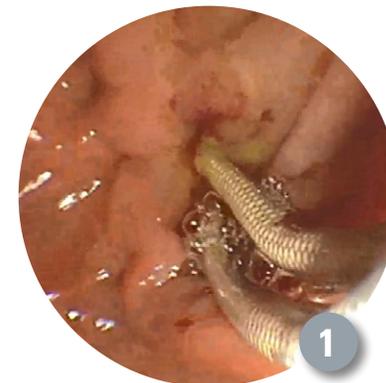
A 52-year-old female with past medical history of moderately differentiated metastatic squamous cell carcinoma of the gallbladder presented to our institution with concerns for biliary obstruction and suspected cholangitis. The patient underwent an ERCP a few weeks prior for new onset obstructive jaundice. This revealed a malignant hilar stricture that was confirmed metastatic squamous cell carcinoma on brushings. The patient subsequently underwent plastic biliary stent placement.

On this particular admission there was concern for stent occlusion and impending cholangitis. The patient was admitted to the MICU and was started on antibiotics with plans for a repeat ERCP on the day of admission.

Procedure

An ERCP was performed and the previously placed plastic biliary stent was removed. Selective cannulation of the CBD was performed using a 0.035 inch Dreamwire™ High Performance Guidewire preloaded on a triple lumen sphincterotome. Deep cannulation of the left biliary system above the stricture was achieved. A cholangiogram was obtained that showed a Bismuth type 4 hilar stricture. The left intrahepatic duct was dilated with a stricture extending below the hilum and into the left intrahepatic duct. A 0.035 inch guidewire was left in the left biliary system. The right intrahepatic duct was selectively cannulated using a 0.025 inch angled guidewire after initial difficulty. The angle tip guidewire was exchanged for a 0.035 inch guidewire. Fluoroscopy confirmed the two guidewires in the right and left biliary systems.

Two Boston Scientific Epic™ Biliary Endoscopic Stent System SEMS were advanced over the two wires simultaneously and positioned for deployment (Figure 1 & 2)*. The dimensions of the right and left stents were 6mm x 40mm and 6mm x 60mm, respectively. Both stents were deployed. After the



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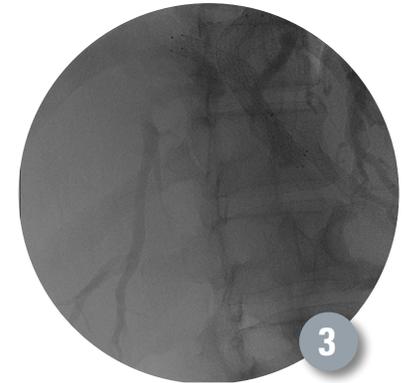
placement of both stents, the distal end of both stents were noted to be below the stricture. The right and subsequently the left stents were deployed successfully with good positioning (Figure 3). Free flow of bile was noted out of the ampulla and the contrast was cleared easily.

Outcome

The patient tolerated the ERCP and did not experience any post-procedure complications. She continued to improve clinically as well as showed improvement of her liver function tests. After discussion with her medical oncology team, the patient elected to be transitioned to hospice care and was subsequently discharged to a hospice facility.

Discussion

This case demonstrates the safety and feasibility of simultaneous placement of bilateral Epic™ Biliary SEMS in patients with unresectable malignant hilar strictures. The procedure was performed without any technical difficulty. The patient continued to improve symptomatically while she transitioned to hospice care. The small 6Fr diameter of the stent, 220cm length catheter, and single thumb deployment delivery system enabled a single-step, simultaneous double metallic stent placement through the accessory channel of the therapeutic duodenoscope. This procedure overcomes the technical difficulty of side by side stent placement using the pre-existing SEMS with large diameter delivery systems.



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***WARNING:** Stenting across a major bile duct branch could lead to compromised future diagnostic or therapeutic procedures.

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