WallFlex® Duodenal Stent

TECHNIQUE SPOTLIGHT





CASE PRESENTED BY: Douglas G. Adler, MD, FACG, FASGE Director of Therapeutic Endoscopy Division of Gastroenterology and Hepatology University of Utah School of Medicine Salt Lake City, Utah

Patient History and Assessment

The patient is a 69-year-old male who underwent a pancreaticoduodenectomy (Whipple procedure) for pancreatic adenocarcinoma approximately 16 months ago followed by adjuvant therapy with chemoradiation. The patient developed clinical signs suggestive of gastric outlet obstruction including nausea, vomiting, and dehydration and was referred for evaluation.

A computerized tomography (CT) scan demonstrated a recurrent mass at the level of the gastrojejunal anastomosis. Biopsy of this lesion revealed recurrent pancreatic adenocarcinoma.

Given his prior history of surgery and chemoradiation, and the unresectable nature of his disease, the patient was not considered a good candidate for surgery. After consultation, he agreed with a planned placement of an enteral stent.

Identifying and Measuring the Stricture

The stricture site was easily identified at the level of the anastomosis, and there was no visible lumen. The stricture was cannulated with a 450cm Hydra Jagwire® Guidewire through a standard RX Biliary System™ catheter. A highly angulated, 2cm long stenosis was identified with normal small bowel beyond via contrast injection.

The guidewire was then deeply advanced into the distal small bowel in preparation for deployment. A WallFlex® Duodenal Stent was selected with a 22mm body, 27mm proximal flare and 90mm length.

"In my experience, the re-constrainable delivery system, combined with the high visibility of the stent under fluoroscopy, supports the deployment of the WallFlex Duodenal Stent to resolve obstructions in inoperable patients."

Douglas Adler, MD



Endoscopic view of high grade obstruction



A guidewire pre-loaded in an RX Biliary System™ catheter is advanced across the stricture into the distal small bowel



WallFlex® Duodenal Stent immediately following deployment showing proximal flared end designed to aid in preventing migration

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CASE PRESENTED BY: DOUGLAS G. ADLER

WallFlex® Duodenal Stent Placement

The stent was advanced over the guidewire and across the stricture symmetrically. Prior to deployment, the advancement of the stent over the wire resulted in some straightening of the stricture, which aided in deployment. Under direct endoscopic and fluoroscopic guidance, and with careful monitoring of the fluoroscopic markers and the ends of the stent, the stent was successfully deployed on the first attempt. No re-constraining was required.

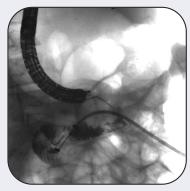
Post Deployment

The stent was deployed exactly as planned, symmetrically about the stricture. Initially after deployment, upon endoscopic and fluoroscopic visualization, the stent had opened up well at the proximal and distal margins. The middle of the stent was only open to a diameter of approximately 4mm, which was likely due to the severity of the stricture. Due to the nature of the Nitinol stent construction, we expected that it would expand fully over the first 24-48 hours by warming to body temperature.*

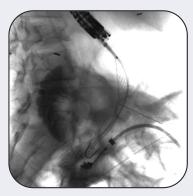
A repeat endoscopy one week later demonstrated significant opening of the mid-portion of the stent with a diameter of approximately 15mm. Clinical success was achieved as the patient improved to the point of being able to take liquids and soft solids by mouth.

Summary

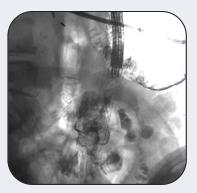
In our institution, in cases of enteral stenting, success is highly dependent on identification of the stricture length and geometry prior to stent selection via a contrast injection. We selected the WallFlex Duodenal Stent given the large proximal flare and the delivery system. While delivering the stent, careful use of the endoscopic and fluoroscopic markers, as well as good communication with nurses and GI technicians, is critical to proper stent deployment.



Contrast injection into the obstruction identifies the site and length of the stricture



WallFlex® Stent post deployment



WallFlex Stent one week post-deployment

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DVG1890 5M 5/07 ENDO-149303-AA April 2013

*Superelastic Nitinol for Medical Devices, Thomas W. Duerig, Alan R. Pelton, and Dieter Stöckel, *Medical Plastics and Biomaterials Magazine*, March 1997

Results from case studies are not predictive of results in other cases. Results in other cases may vary.