Elegant endoscopic solution to a complex surgical problem: creation of an alimentary limb to duodenal fistula using a lumen-apposing metal stent in a case of blind duodenal loop following a complicated duodenal switch

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This case report presents a 58-year-old female who underwent an open duodenal switch (DS) in 2005. Surgical history also includes a 25 cm alimentary limb (AL) small bowel resection for volvulus. She recently underwent a robotic total hysterectomy with bilateral salpingo-oophorectomy for endometrial cancer. She presented in septic shock 5 days following this procedure with her biliary limb (BL) incarcerated in a trocar-site hernia. Upon abdominal exploration, her entire BL was necrotic. She underwent a 220 cm small bowel resection including her BL with the proximal staple on the angle of Treitz. Following improvement of her septic shock, a second look laparotomy 24 hours later noted no further ischemia.

In this context, a re-connection of her BL was deemed impossible and a decompression duodenostomy too risky. After multi-disciplinary discussion, a fistula was created between the proximal AL and the dilated duodenum using a 20 mm lumen-apposing metal stent (LAMS) under endoscopic ultrasound (EUS) guidance. This allowed a complete and rapid decompression of the duodenum and improvement in her overall status with no subsequent complications.

The LAMS was removed endoscopically under conscious sedation 3 months later and the residual latero-lateral anastomosis was easily traversed with a diagnostic gastroscope. The patient is currently undergoing serial endoscopic evaluations to ensure patency of this newly

created anastomosis. Despite a 70 cm common channel and a 40 cm AL, she has normal bowel movements and normal nutritional status.

This case reports highlights the novel use of EUS-guided LAMS to manage an unusual complication such as a blind duodenal loop in a patient with modified DS anatomy.