DUODENOJEJUNOSTOMY: A NOVEL TECHNIQUE FOR POST-GASTRECTOMY DUODENAL SURVEILLANCE IN HEREDITARY CANCER PATIENTS

Annie Laurie Benzie MD, Briana Collins BS and D. Rohan Jeyarajah MD, FACS
Methodist Richardson Medical Center, Richardson, Texas

Introduction

Muir Torre syndrome is a rare variant of Hereditary nonpolyposis colorectal cancer (Lynch) syndrome that predisposes patients to sebaceous skin tumors and visceral malignancies [1, 2]. While colon and urogenital cancers are most common, pancreatic and gastric malignancies are also included and therefore these patients require surveillance endoscopy at regular intervals [3]. In undertaking gastric resection in this patient population, access to the duodenum for reasons of surveillance is a necessity given the increased risk of neoplasm.

Case Presentation

A 66-year-old gentleman with a history of Muir-Torre syndrome presented with gastric adenocarcinoma nineteen years after undergoing right hemicolectomy for colorectal adenocarcinoma. After performing an open gastrectomy with D2 lymphadenectomy in the standard fashion, a generous Roux limb of 75cm was created, brought antecolic and reconstruction began with a 29Fr stapled end-to-side esophagojejunostomy. We then proceeded to create a hand-sewn end-to-side duodenojejunal anastomosis using single layer running 3-0 PDS suture (Figure 1). Our anesthesia colleagues assisted us in performing an underwater immersion test by instilling air via the nasogastric tube positioned in our Roux limb without any evidence of leak. A 14Fr feeding jejunostomy tube was also placed approximately 10cm distal to our jejuno-jejunostomy in a Witzel fashion. Our patient did well on post-operative follow-up.

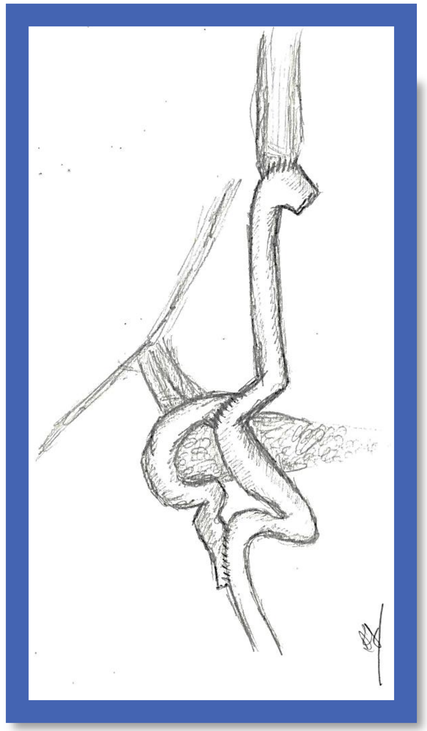


Figure 1 – Illustration of post-reconstruction anatomy

Discussion

Addition of a duodenal-jejunal anastomosis in patients undergoing Roux-en-Y reconstruction provides a method of luminal access to both the biliary tree and duodenum for both diagnostic and therapeutic endoscopy. While there are other potential methods of access including balloon and laparoscopic-assisted endoscopy, these are more invasive, technically difficult and expensive which precludes their use for screening purposes. While an additional anastomosis in a patient of average risk would not be recommended, in patients with elevated risk of duodenal or pancreaticobiliary pathology we would encourage surgeons to consider this in their armamentarium.

Conclusion

In patients with increased risk of multiple visceral malignancies due to underlying genetic syndromes such as Muir Torre and Familial Adenomatous Polyposis, consideration for future neoplastic processes is an integral part of surgical decision-making. We present a novel technique in allowing for duodenal access after total gastrectomy by adding a duodenojejunal anastomosis while performing Roux-en-Y reconstruction.

References

1 - Muir EG, Bell AJ, Barlow KA. Multiple primary carcinomata of the colon, duodenum, and larynx associated with kerato-acanthomata of the face. *Br J Surg*. 1967;54:191–195.

2 - Torre D. Multiple sebaceous tumors. *Arch Dermatol*. 1968;98:549–551.

3 - Jones B, Oh C, Mangold E, Egan CA. Muir–Torre syndrome: diagnostic and screening guidelines. *Aust J Dermatol*. 2006;47:266–9.