CLINICAL VIGNETTE

Colonic Conduit Adenocarcinoma Following Esophagectomy and Colonic Interposition

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Case Presentation

A 62-year-old male presented for outpatient gastroenterology evaluation. At the age of 16 months old he drank oven cleaner, resulting in severe esophageal injury and subsequent esophageal stricture. He underwent esophagectomy with colonic interposition and had been doing very well without symptoms until a few months prior to his appointment. He noted onset of intermittent dysphagia with solid foods with 10 pounds of weight loss over the preceding three to four months. He denied abdominal pain, nausea, or vomiting, melena or hematochezia. He reported a normal colonoscopy four years prior and an unremarkable upper endoscopy fifteen years prior. The patient did not have other significant past medical or surgical history. His family history included colorectal cancer in his mother. On physical examination, vital signs were normal and abdomen was soft, non-tender with normal bowel sounds. Chest examination revealed normal breath sounds and no wheezing. The remainder of the examination was unremarkable. Upper endoscopy was recommended and scheduled. The upper endoscopy revealed esophagocolonic anastomosis at 20 cm with colonic interposition. There was luminal narrowing with mucosal irregularity at 45cm, concerning for a mass lesion and biopsies were obtained. Due to the luminal narrowing, the scope could not be advanced beyond this area. The biopsies revealed moderately differentiated adenocarcinoma, arising from colonic type mucosa. The patient received neoadjuvant therapy and surgical resection of the colon adenocarcinoma in the interposition graft with end to side cologastrostomy. He continues to undergo surveillance upper endoscopy and colonoscopy procedures, which have remained free of tumor recurrence.

Discussion

Esophageal injury following caustic ingestion is important to recognize. Approximately half of all caustic ingestions occur in young children, and commonly involve household cleaning products.[1] One treatment option to manage complications following caustic ingestion is esophageal resection with colonic interposition. This involves mobilization of a portion of the colon (including vascular supply), which is then positioned in the chest to replace the resected esophagus.[2] The decision regarding which segment of the colon to use, is surgeon dependent. There are a number of potential procedure related complications, including anastomotic leak, ischemia of the conduit, anastomotic stricture, and gastroesophageal reflux.[3-5] One of the main risk factors for complications is decreased perfusion. Patients are often maintained on dopamine and nitroglycerine infusions for the first 72 hours after surgery, to assist with perfusion. Preoperative angiography is generally performed, however, some surgeons suggest that this may prevent surgical dissection, with some adopting this practice.

Our case illustrates the importance of screening for colon polyps and colon cancer in the colonic conduit, following esophagectomy and colonic interposition. Although these are considered rare, cases have been reported. Tranchart et al reported less than 0.5% of patients who undergo esophagectomy and colon interposition following caustic ingestion develop adenocarcinoma arising in the interposed colon.[6] There are no clear guidelines providing optimal intervals for endoscopic screening for this situation,[7] only that screening should be performed on a regular basis. Colonoscopy should be performed prior to colonic interposition to rule out pre-existing lesions. There are limited treatment options for this, and because of the rarity, specialized surgical expertise is required. If the lesion is localized, the most common surgery includes resection of the lesion with cologastrostomy.[8] Patients with localized disease usually do well after surgery. However, the need for continued screening and surveillance should be reinforced.

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