Adenocarcinoma of a colonic interposition graft for benign esophageal stricture in a young woman

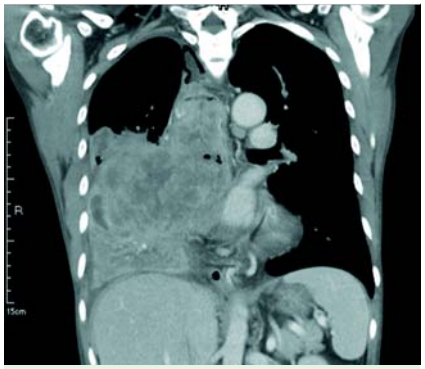

Fig. 1 Chest computed tomography (CT) scan showing a huge heterogeneous mass arising from the reconstructed esophagus and directly invading the middle and lower lobes of the right lung, causing passive atelectasis. The bronchus intermedius also appears compressed by the mass.

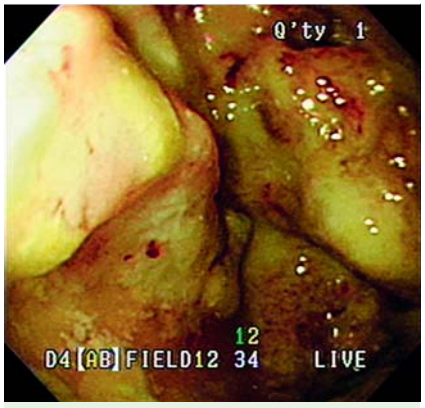

Fig. 2 Endoscopic view showing the esophageal tumor situated 27 cm from incisors.

There are more than 5000 cases of caustic ingestion in the United States annually [1]. About one-third of these patients subsequently develop esophageal strictures [2]. The colon has a good blood supply, is long enough to be pulled up to the neck, has a low incidence of disease, and is resistant to gastric secretions [3]. Therefore, it is usually the preferred source of tissue for esophageal replacement.

A 40-year-old woman had suffered a corrosive esophageal injury after an attempted suicide 15 years previously. Reconstruction of the esophagus with part of the ascending colon had been done at that time. She was admitted to our hospital with fever, a productive cough, vomiting, and poor appetite, which had persisted for 1 week. At the emergency department, her temperature was 38.1 °C. Auscultation of breathing sounds in the right lung revealed rales and rhonchi. Laboratory test results showed leukocytosis, predominantly due to increased neutrophils. Computed tomography (CT) of the thorax showed a huge heterogeneous mass arising from the reconstructed esophagus. The mass had directly invaded the middle and lower lobes of the right lung, causing pneumonia and passive atelectasis (**Fig. 1**). Panendoscopy showed the esophageal tumor was situated 27 cm from the incisors (**Fig. 2**). Histopathology of a biopsy revealed an adenocarcinoma of colonic origin. The patient died 4 months after admission from nosocomial infections.

Colonic interposition for esophageal reconstruction has several early and late complications, such as graft necrosis, anastomotic leakage, fistula formation, strictures of the anastomosis, and gastrocolic reflux. Adenocarcinomas in this situation are extremely rare. There are several case reports of colo-esophageal adenocarcinoma after reconstruction for underlying malignant conditions [4–11]. However, only four cases have been reported on PubMed in patients with benign esophageal stricture (see **Table 1**).

Our patient developed an adenocarcinoma of the interposed colon 15 years after her reconstruction, when she was aged 40. No risk factors for colon cancer, other than the procedure itself, could be identified. One possible reason for the development of this tumor could be the presence of already pretumorous polyps in the grafted colon. On the other hand, this intervention might lead to direct contact of the transplant with irritants from the oral cavity. Therefore, the procedure should be considered as a risk factor for colon cancer.

We suggest a screening colonoscopy should be performed before carrying out esophageal reconstruction and that regular follow-up endoscopies should be undertaken in patients with esophageal colonic-interposition grafts.

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Competing interests: None

Table 1 The published cases of adenocarcinoma of the colo-esophagus after reconstruction for benign esophageal strictures.

Report	Year of publication	Sex Age, years	Original disease	Original treatment	Time since reconstruction, years
Licata et al. [12]	1978	Male 51	Esophageal stricture after corrosive injury	Right colon for reconstruction	11
Houghton et al. [13]	1989	Male 64	Benign esophageal stricture	Right colon for reconstruction	20
Altorjay et al. [14]	1995	Male 65	Benign esophageal stricture	Left colon for reconstruction	5
Hsieh et al. [15]	2005	Male 57	Esophageal stricture after corrosive injury	Right colon for reconstruction	39
Our report	2014	Female 40	Esophageal stricture after corrosive injury	Right colon for reconstruction	15

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References

1 *Kikendall JW*. Caustic ingestion injuries. Gastroenterol Clin North Am 1991; 20: 847–857
2 *Zargar SA*, *Kochhar R*, *Nagi B* et al. Ingestion of strong corrosive alkalis: spectrum of injury to upper gastrointestinal tract and natural history. Am J Gastroenterol 1992; 87: 337–341
3 *Zhou JH*, *Jiang YG*, *Wang RW* et al. Management of corrosive esophageal burns in 149 cases. J Thorac Cardiovasc Surg 2005; 130: 449–455
4 *Goldsmith HS*, *Beattie EJ Jr*. Malignant villous tumor in a colon bypass. Ann Surg 1968; 167: 98–100
5 *Haerr RW*, *Higgins EM*, *Seymore CH* et al. Adenocarcinoma arising in a colonic interposition following resection of squamous cell esophageal cancer. Cancer 1987; 60: 2304–2307
6 *Theile DE*, *Smithers BM*, *Strong RW* et al. Primary adenocarcinoma in a colonic 'oesophageal' segment. Aust N Z J Surg 1992; 62: 158–160
7 *Lee SJ*, *Koay CB*, *Thompson H* et al. Adenocarcinoma arising in an oesophageal colonic interposition graft. J Laryngol Otol 1994; 108: 80–83
8 *Goyal M*, *Bang DH*, *Cohen LE*. Adenocarcinoma arising in interposed colon: report of a case. Dis Colon Rectum 2000; 43: 555–558
9 *Liau CT*, *Hsueh S*, *Yeow KM*. Primary adenocarcinoma arising in esophageal colon interposition: report of a case. Hepatogastroenterology 2004; 51: 748–749
10 *Kuwabara Y*, *Kimura M*, *Mitsui A* et al. Adenocarcinoma arising in a colonic interposition following a total gastrectomy: report of a case. Surg Today 2009; 39: 800–802
11 *Spitali C*, *De Vogelaere K*, *Delvaux G*. Dysphagia after colon interposition graft for esophageal carcinoma. Case Rep Pathol 2012; 2012: 738205
12 *Licata AA*, *Fecanin P*, *Glowitz R*. Metastatic adenocarcinoma from oesophageal colonic interposition. Lancet 1978; 1: 285
13 *Houghton AD*, *Jourdan M*, *McColl I*. Dukes A carcinoma after colonic interposition for oesophageal stricture. Gut 1989; 30: 880–881
14 *Altorjay A*, *Kiss J*, *Voros A* et al. Malignant tumor developed in colon-esophagus. Hepatogastroenterology 1995; 42: 797–799
15 *Hsieh YS*, *Huang KM*, *Chen TJ* et al. Metachronous adenocarcinoma occurring at an esophageal colon graft. J Formos Med Assoc 2005; 104: 436–440

Bibliography

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