Peroral endoscopic myotomy for achalasia after distal gastrectomy

Achalasia is a relatively rare esophageal motility disorder with a reported incidence of approximately 1 in 100,000 worldwide [1]. The occurrence of achalasia in patients with a distal gastrectomy is rare. We present a patient with achalasia and a distal gastrectomy who was successfully treated with peroral endoscopic myotomy (POEM).

A 72-year-old man with an approximately 30-year history of progressive dysphagia and regurgitation was referred to our hospital. He had undergone a distal gastrectomy for a gastric ulcer 40 years earlier. Esophagogastroduodenoscopy showed a dilated esophagus, a Billroth I anastomosis, and a suture line along the lesser curvature (Fig. 1). Esophagography showed delayed esophageal emptying and narrowing at the lower esophageal sphincter (LES) (Fig. 2). High resolution manometry demonstrated spastic contraction and impaired LES relaxation (Fig. 3).

We diagnosed nonsigmoid type III achalasia according to the Chicago classification and performed POEM. To avoid the suture line, the myotomy was done at the 5-o'clock position (Fig. 4). Esophagography on postoperative day 1 showed adequate passage of contrast into the remaining portion of the stomach (Fig. 5). The patient’s dysphagia and regurgitation had resolved completely at follow-up 8 weeks postoperatively.

Laparoscopic Heller’s myotomy is challenging in postoperative patients with achalasia because of their extensive adhesions and altered anatomy [2, 3]. On the
other hand, POEM is a minimally invasive procedure with an approach from the esophageal lumen that is not complicated by the effects of previous surgery [4]. Recently, myotomy has often been performed at an anterior (11- or 2-o’clock) position or a posterior (5-o’clock) position because there is less risk for gastroesophageal reflux [5]. However, the 11- and 2-o’clock positions should be avoided in patients who have severe fibrosis and staples from previous surgery. We successfully treated this patient with a myotomy at the 5-o’clock position. When a patient with achalasia and a distal gastrectomy is treated with POEM, selecting the appropriate myotomy position is of the utmost importance.

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Fig. 4  Peroral endoscopic myotomy.  a Mucosal incision site at the 5-o’clock position in the mid esophagus.  b Endoscopic view of the submucosal tunnel.  c Selective myotomy of circular muscle fibers.  d After myotomy.

Fig. 5  Esophagogram obtained on post-operative day 1 revealing adequate passage of contrast into the remaining portion of the stomach.