Biodegradable stents are increasingly used to treat benign gastrointestinal strictures [1,2]. Here, we report on two patients who developed persistent vomiting after thoraco-abdominal esophageal resection for cancer and perforation. Assessments by endoscopy and imaging studies demonstrated a severe stricture of the distal gastric conduit in both patients (Fig. 1), which were thought likely to be due to low-flow ischemia of the gastric conduit. The treatment of both patients was identical. Because balloon dilation (20-mm CRE Wireguided Balloon Dilator; Boston Scientific, Galway, Ireland) had not produced an improvement in symptoms, a 10-cm long biodegradable stent (BD Ella; Ella-CS, s.r.o., Hradec Králové, Czech Republic) was placed.

Patient 1 became immediately symptom-free and remained so 12 months later. The stent was fully resorbed after 16 weeks. In contrast, patient 2 experienced persistent grade 4 dysphagia due to insufficient stent expansion (Fig. 2a) as the stenosis was too rigid for the maximal expansive capacity of the stent. Follow-up imaging and endoscopy revealed progressive stenosis due to stent-induced hypergranulation (Fig. 2b and Fig. 3), a rare complication after the use of biodegradable stents that was also observed in some earlier studies [1,3,4]. Despite repeated balloon dilation to 20 mm, the grade 4 dysphagia persisted. After 13 weeks, the stent was fully resorbed. The stenotic area was slightly enlarged compared with the situation before placement of the stent, but was still considerably smaller than the original lumen of the gastric conduit. A small, 1 to 2-cm long segment with a high-grade stenosis remained in the middle of the conduit, probably a remnant of the hypergranulation (Fig. 4). Repeated balloon dilation to 20 mm at monthly intervals resulted in a progressive improvement over the course of 6 months (Fig. 5). Thereafter, the patient was able to eat semisolid foods, consistent with grade 2 dysphagia.

Placement of biodegradable stents is an emerging and promising treatment alternative for benign esophageal strictures, but if stenosis due to stent-induced hypergranulation occurs, significant morbidity ensues.
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