Computed tomography-guided endoscopic recanalization of a completely obstructed rectal anastomosis

Fig. 1 Endoscopic view of the colorectal anastomosis from the rectum showing complete obstruction.

A 44-year-old man presented with complete obstruction of a colorectal anastomosis. He had undergone laparoscopic resection of the sigmoid colon 9 months previously for colonic perforation caused by endoscopic resection of a Peutz–Jeghers polyp. Surgical resection and reconstruction of the anastomosis, including diverging ileostomy, had been performed 6 months later because of anastomotic stricture and leakage. Closure of the ileostomy had been planned for 3 months later but high-pressure fluoroscopy showed no passage of contrast medium through the anastomosis and endoscopy confirmed complete obstruction with the former lumen being unidentifiable (► **Fig. 1**). The anastomosis could not be reached endoscopically through the ileostomy because of peritoneal adhesions.

A computed tomography (CT) scan was performed and the colon was filled with air through the ileostomy. A gastroscope was advanced through the rectum and placed close to the anastomosis. The CT scan showed a membrane at the tip of the endoscope that was completely separating the descending colon and the rectum (► **Fig. 2a**). An incision of the membrane was performed under CT guidance using a needle-knife (OE11018N3; Endo-Flex, Voerde, Germany), and a guidewire was advanced through the incision. The CT scan confirmed the intracolonic position of the wire (► **Fig. 2b**) and dilation using a wire-guided balloon (M00558680; Boston Scientific, Natick, Massachusetts, USA) was

Fig. 2 Computed tomography (CT) scan showing: **a** the endoscope in the rectum and the air-filled descending colon, which are separated by a membrane; **b** the correctly positioned guidewire that had been advanced into the descending colon after incision of the membrane.

Fig. 3 Endoscopic view during balloon dilation after incision of the membrane and positioning of the guidewire under computed tomography (CT) guidance.

Fig. 4 Endoscopic view of the anastomosis 4 weeks after the endoscopic recanalization procedure.

performed up to a diameter of 12 mm (● Fig. 3).

The ileostomy was closed surgically 4 weeks later. During the first four weeks after recanalization, endoscopic dilation was repeated weekly with 18-mm balloons, by the end of which the stenosis had resolved completely (● Fig. 4). After 2 years, the patient remains free of symptoms.

Stricture of a colorectal anastomosis is a known complication and endoscopic dilation is the standard treatment. However, complete obstruction is rare and its treatment is not standardized. Case reports have described endoscopic approaches using different instruments, EUS-guided procedures, and rendezvous techniques [1–5]. In addition, CT guidance for endoscopic navigation should be considered to be helpful, especially when the anastomosis cannot be reached endoscopically from the proximal colon.

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Competing interests: None

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