Endoscopic internal drainage using double-pigtail stent placement to manage a case of proximal colo-colonic anastomotic leakage

A 39-year-old man underwent a distal spleno-pancreatectomy and colonic resection for a tail pancreatic cancer infiltrating the colonic splenic flexure. Five days after surgery, the patient experienced fever and abdominal pain. A computed tomography (CT) scan showed a 10-cm intra-abdominal collection with free air bubbles inside; oral contrast-medium intake revealed a passage from the colon to the abdominal collection, highly suspicious of an anastomotic leak (Fig. 1).

Endoscopy confirmed a wide anastomotic leakage with access to a peri-anastomotic cavity (Fig. 2 a, b) and we decided to attempt endoscopic internal drainage in order to avoid a new surgical procedure.

Under endoscopic view and fluoroscopic guidance, two double-pigtail plastic stents (10-Fr/10-cm and 7-Fr/7-cm, Bos-
ton Scientific, Massachusetts, USA) were placed across the leak orifice (▶ Video 1) with one pigtail tip of each stent located inside the cavity. A CT scan 24 hours later confirmed the correct placement of the two stents.

Follow-up CT scans showed a progressive reduction in the collection’s size up to 2 cm at 5 weeks, so stent removal was planned. Endoscopy showed a closure of the anastomotic leak and a single stent “in situ” that was removed with a forceps. The next CT scan confirmed the complete collapse of peri-anastomotic collection (▶ Fig.3). After 6 months, the colo-colonic anastomosis appeared endoscopically regular with a complete closure of the leakage (▶ Fig.4).

Endoscopy is emerging as a first-line approach over surgery for management of post-operative gastrointestinal leaks and fistulae [1]. While endoluminal vacuum therapy is reported as an effective method for management of colo-rectal anastomotic leakages [2], endoscopic internal drainage by double-pigtail stent placement is described as a conservative treatment of leaks and fistulas after upper gastrointestinal surgery, especially in the bariatric setting [3–5]. The application of endoscopic internal drainage technique in this case allowed us to successfully and conservatively manage a proximal colo-colonic anastomotic leakage without needing a protective ileostomy or an additional surgical procedure.

Competing interests

Dr. Roberto Di Mitri is consultant of Boston Scientific; the other authors have no conflicts of interest.

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