

## SCIENTIFIC LETTER

### Biliary stent-induced duodenal perforation<sup>☆</sup>



#### Perforación duodenal por endoprótesis biliar

A previously healthy 52-year-old woman was referred for difficult choledocholithiasis, documented during open cholecystectomy with bile duct exploration and T-tube placement. At our hospital, she underwent endoscopic retrograde cholangiopancreatography (ERCP) with plastic stent placement (10 Fr x 12 cm) and T-tube removal. The patient arrived at the emergency room with acute abdomen, 12 h after the ERCP. During the approach, there were signs of systemic inflammatory response, and an abdominal computed tomography scan showed that the proximal end of the biliary stent was in the bile duct and the distal end was perforating the third part of the duodenum (Fig. 1). Upper gastrointestinal endoscopy corroborated the site of perforation by the endostent (Fig. 2). The patient underwent laparotomy with endostent extraction, primary closure of the duodenal perforation (Fig. 3), bile duct exploration with choledocholithiasis resolution, and verification through intraoperative cholangioscopy (Fig. 4). Duodenal perforations due to endostents are not considered in the Stapfer classification.<sup>1</sup> Such perforations are rare (1%) and due to stent migration (which occurs in 8–10% of the cases).<sup>2</sup> The majority of reported cases have involved stents larger than 10 Fr x 12 cm.<sup>2,3</sup> Treatment is endoscopic in the absence of peritonitis, or surgical in patients with retroperitoneal collections, sepsis, or peritonitis.<sup>1,2</sup>

#### Ethical disclosures

**Protection of human and animal subjects.** The authors declare that no experiments were performed on humans or animals for this study.

**Confidentiality of data.** The authors declare that they have treated all patient data with confidentiality and anonymity, following the protocols of their work center.

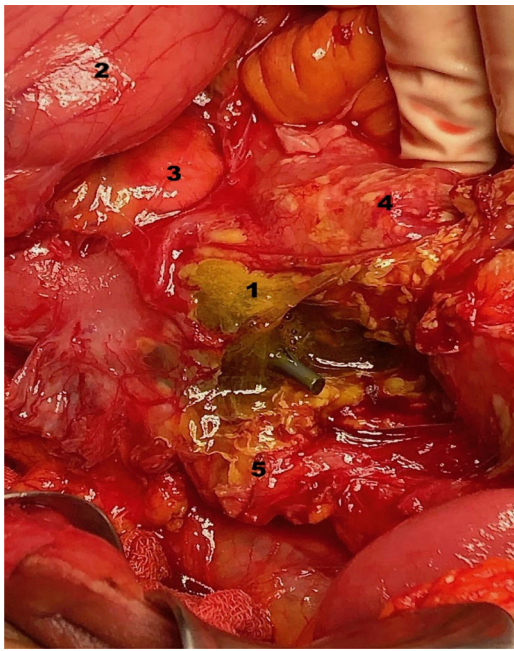
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**Figure 1** Abdominal computed tomography scan with oral contrast agent showing the migrated plastic stent, perforation of the third part of the duodenum, and contrast agent leakage.



**Figure 2** Upper gastrointestinal endoscopy image corroborating the migration site and perforation by the plastic stent.



**Figure 3** Image of the surgical procedure. Number 1: third part of the duodenum perforated by the plastic stent, 2: stomach; 3: pancreatic head; 4: mesocolon; 5: retroperitoneum.



**Figure 4** Intraoperative cholangioscopy, with the absence of residual lithiasis or stricture, enabling primary closure of the common bile duct with no plastic stent or T-tube.

**Right to privacy and informed consent.** The authors declare that no patient data appear in this article.

Informed consent was not requested because the present article contains no personal data that enable the patient to be identified.

### Financial disclosure

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### Conflict of interest

The authors declare that there is no conflict of interest.

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