

“Pusher-To-Retriever Repurposing” as a Novel Endoscopic Bailout for Proximal Biliary Stent Migration

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Keywords

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**“Pusher-to-retriever repurposing” como uma nova
solução endoscópica para a migração proximal de
prótese biliar**

Palavras Chave

 Colangiopancreatografia retrógrada endoscópica ·
 Migração prótese · Extração endoscópica · Endoscopia

A 62-year-old patient presented for endoscopic retrograde cholangiopancreatography (ERCP) due to bile leakage with incipient biliary peritonitis after laparoscopic cholecystectomy. After biliary access, cholangiography confirmed cystic duct leakage, and biliary stenting using a 10-Fr (7 cm; Optimed, Ettlingen, Germany) double pigtail was performed after medium-size papillotomy.

However, given a, in retrospect, too short stent length, the distal end of the stent became wedged into the pre-papillary common bile duct after release. Various attempts to extract the stent by baskets and/or foreign body forceps failed due to lack of maneuverability in this narrow operative field with a decision made to terminate the first ERCP session by transpapillary implantation of a longer 11-cm stent into the right hepatic system (Fig. 1a, note cystic duct leakage with surgical drainage and migrated stent in the left hepatic duct). In another ERCP session 2 days later and after successful stent re-cannulation (Fig. 1b, 2a), an over-the-wire snare approach likewise failed, such that we resorted to a “small-for-size” 7-Fr stent pusher (Optimed), being advanced deeply until dynamic cholangiography confirmed a tight connection to the variably deformed stent (Fig. 1c, 2b, note the radiolucent nature of the pusher). Next, the stent was extracted by pulling back the pusher (Fig. 1d, 2c). The intimate association of the “pusher-stent complex” is additionally illustrated ex vivo in Figure 2d. Finally, another sufficiently long stent with the same specifications as before (10-Fr, 11-cm; see Fig. 1a) was re-inserted, and

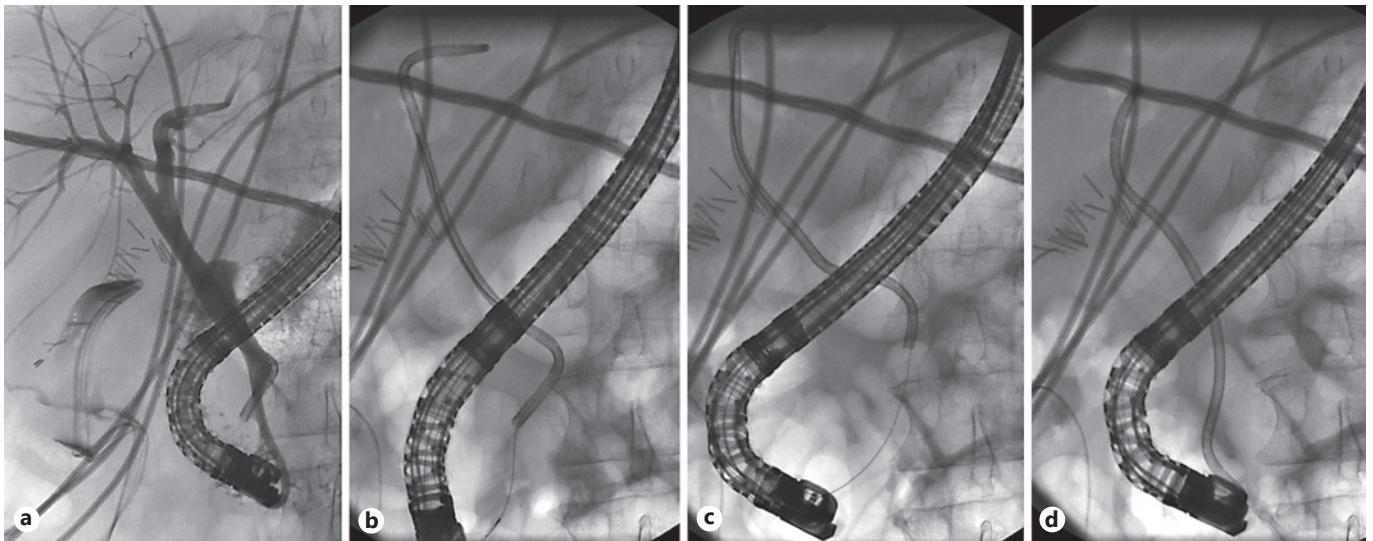


Fig. 1. Fluoroscopic demonstration of the “pusher-to-retriever repurposing” approach. **a** Proximal migration of biliary plastic stent with insertion of another stent (right hepatic) to ensure transpapillary drainage in the first ERCP session. Note cystic duct leakage alongside a percutaneous surgical drain. **b** Successful cannulation

of the 10-Fr biliary double pigtail stent wedged in the prepapillary segment by a 0.035-in guidewire. **c** The (radiolucent) 7-Fr pusher firmly engaging the migrated stent with visible deformation. **d** Transpapillary stent extraction by pulling the stent pusher.

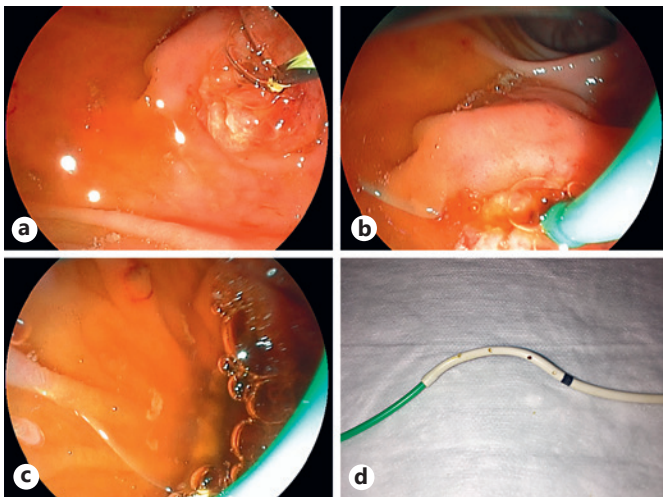


Fig. 2. Endoscopic demonstration of the “pusher-to-retriever repurposing” approach. **a** Migrated stent re-cannulation by a 0.035-in guidewire. **b** The “small-for-size” stent pusher (7-Fr) engaging the migrated stent (10-Fr). **c** Successful transpapillary extraction of the stent. **d** Ex vivo illustration of the “pusher-stent complex.”

re-ERCP scheduled 4 weeks later, according to standard proceedings in our center, with documentation of leakage closure.

There are myriad techniques available for proximal biliary stent migration both over-the-wire or freehand [1]. Here, a novel endoscopic bailout is introduced as “pusher-to-retriever repurposing” reminiscent of the Soehendra stent retriever approach, albeit associated with less costs and probably more widely available in endoscopy services.

Statement of Ethics

Patient consent has been obtained.

Disclosure Statement

The authors have no conflicts of interest to report.

Reference

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