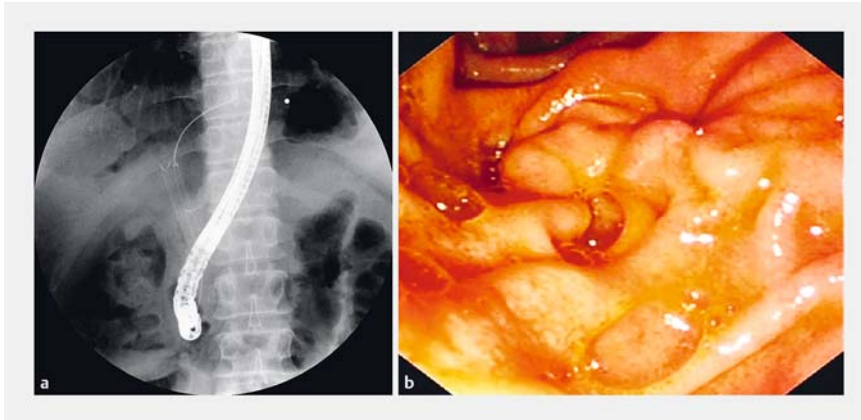


## Endoscopic removal of a proximally migrated biliary metallic stent



► **Fig. 1** **a** A fully covered self expanding metal stent, placed 8 months previously, had migrated to the upper and middle common bile duct. **b** The stent had migrated entirely into the bile duct and could no longer be visualized at the duodenal papilla.

A 37-year-old Asian man had undergone laparoscopic cholecystectomy that was complicated by proximal common bile duct (CBD) stenosis requiring endoscopic retrograde cholangiopancreatography (ERCP) placement of a fully covered self-expandable metal biliary stent (FCSEMS) at a local hospital 8 months previously. His jaundice subsided after the initial stent placement. However, over the next 3 months, he developed recurrent abdominal pain and fever. Repeat imaging showed the stent has migrated proximally.

After multiple failed attempts at removal of the migrated stent at local hospitals, the patient was transferred to the West China Hospital (Chengdu, Sichuan, China) for stent removal. During the ERCP, fluoroscopy showed mild stricture of the distal CBD and migration of the stent from the duodenal papilla into the upper-middle common bile duct (► **Fig. 1 a, b**).

Several methods for stent removal have been reported [1–3]. We elected to dilate the CBD stricture to 1.0 cm with a biliary balloon dilator (► **Fig. 2 a, b**) and attempted to use the balloon dilator to

drag the stent out. However, this was unsuccessful as the stent had become embedded in the bile duct wall. We then attempted to remove the stent by means of rat-tooth forceps. After several attempts, we were finally able to grasp the distal end of the stent and pulled the stent out (► **Fig. 3 a, b**; ► **Video 1**). A nasobiliary drain was placed after the procedure to ensure there was no bleed-

ing. There were no post-procedure complications. The nasobiliary drain was removed and the patient was discharged 3 days afterwards. During the 3 months of follow-up, the patient experienced no particular discomfort.

Endoscopy\_UCTN\_Code\_CPL\_1AK\_2AD

### Competing interests

None

### The Authors

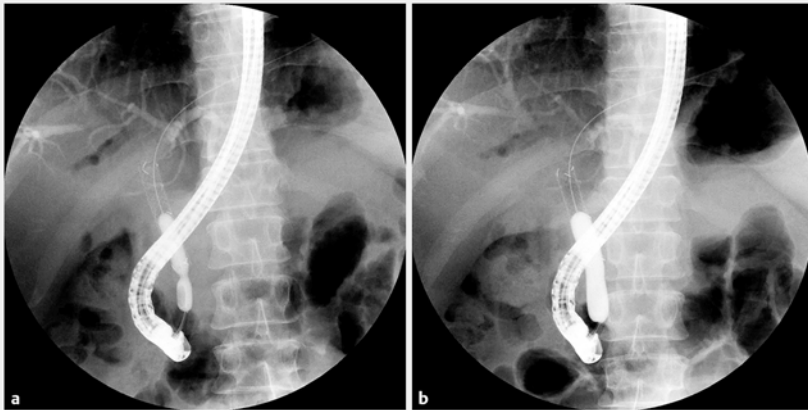
**Chun Cheng Wu<sup>1,\*</sup>, Juliana F. Yang<sup>2,\*</sup>, Mei Xu<sup>1</sup>, Wei Liu<sup>1</sup>, Bing Hu<sup>1</sup>**

- 1 Department of Gastroenterology, West China Hospital, Sichuan University, China
- 2 Department of Internal Medicine, Division of Digestive and Liver Diseases, University of Texas Southwestern Medical Center, Dallas, Texas, USA

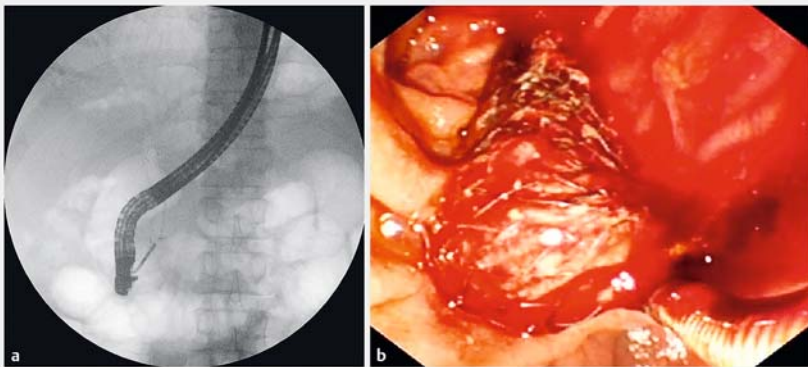
\* Co-first authors.



► **Video 1:** Successful endoscopic removal of a proximally migrated and embedded biliary metallic stent using rat-tooth forceps, after failed attempts at removal by means of a balloon dilator.



► **Fig. 2** **a** Stenosis of the lower common bile duct. **b** Dilation to 1.0 cm with a biliary balloon dilator.



► **Fig. 3** **a** The stent was grasped using rat-tooth forceps. **b** The stent was pulled out of the bile duct.

## Corresponding author

### Bing Hu, MD

West China Hospital, Sichuan University,  
Department of Gastroenterology, NO. 37,  
Guo Xue Xiang, Sichuan Chengdu,  
Sichuan 610041, China  
Fax: +86-028-85423387  
hubingnj@163.com

## References

- [1] Cho NJ, Lee TH, Park SH et al. Endoscopic removal of a proximally migrated metal stent during balloon sweeping after stent trimming. *Clin Endosc* 2013; 46: 418–422
- [2] Kawakami H, Uebayashi M, Konishi K et al. A rare complication with extraction of proximally migrated biliary stent by using a basket catheter. *Gastrointest Endosc* 2008; 67: 1170–1171
- [3] Matsushita M, Takakuwa H, Nishio A et al. Open-biopsy-forceps technique for endoscopic removal of distally migrated and impacted biliary metallic stents. *Gastrointest Endosc* 2003; 58: 924–927

## Bibliography

DOI <http://dx.doi.org/10.1055/s-0043-101521>  
*Endoscopy* 2017; 49: E99–E100  
© Georg Thieme Verlag KG  
Stuttgart · New York  
ISSN 0013-726X