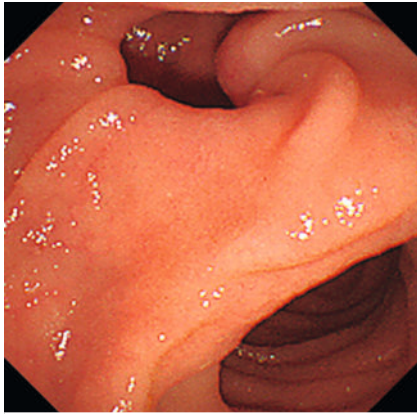
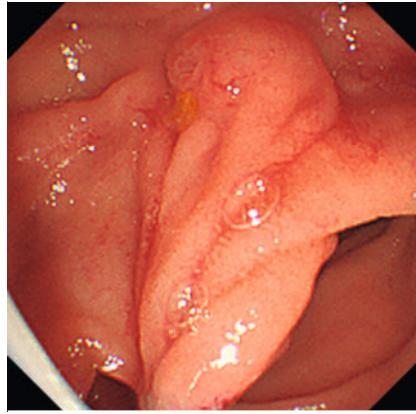


## Successful endoscopic biliary intervention for duodenal peridiverticular papilla using a novel traction device

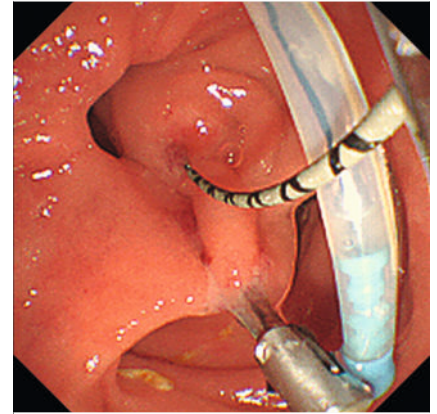
OPEN  
ACCESS



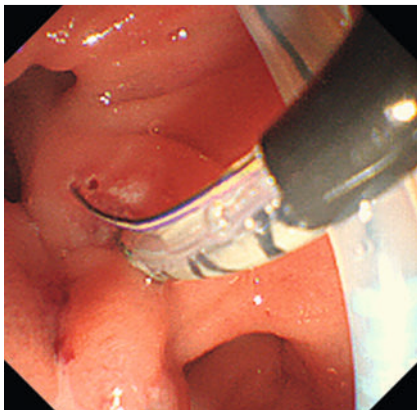
► **Fig. 1** Endoscopic visualization of the peridiverticular papilla in the duodenum.



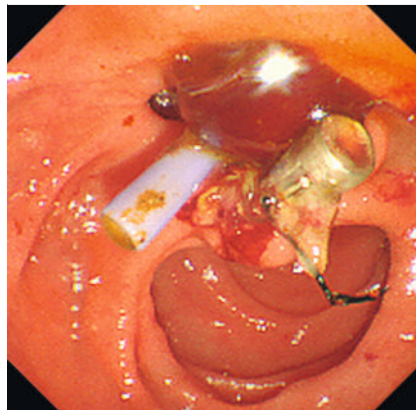
► **Fig. 2** When the traction device is manipulated, the duodenal papilla is moved out of the diverticulum.



► **Fig. 3** Successful selective biliary cannulation after repositioning of the papilla.



► **Fig. 4** Endoscopic sphincterotomy is performed.



► **Fig. 5** After stone extraction and placement of a biliary drainage tube, the line used for traction is cut using an endocutter.



► **Video 1** Successful biliary cannulation for a duodenal peridiverticular papilla using a novel traction device (EndoTrac).

Periampullary diverticulum is defined as herniation of the mucosa or submucosa through a defect in the muscular layer around the papilla [1]. Achieving selective biliary cannulation for peridiverticular papilla is challenging [1], and several endoscopic devices and techniques have recently been developed [1–4]. Herein, we present a case of successful endoscopic biliary intervention using a novel traction device for the peridiverticular papilla in a patient with choledocholithiasis.

A 92-year-old woman was diagnosed with choledocholithiasis on computed tomography after treatment for aspiration pneumonia. Endoscopic sphincterotomy and stone extraction were performed (► **Video 1**). On endoscopy, a duodenal papilla was identified as being situated within the diverticulum at its periphery (► **Fig. 1**); however, biliary cannulation failed because of poor visualization of the papillary orifice. Therefore, we used a novel traction device (EndoTrac; TOP Corporation, Tokyo, Japan) comprising a line

with a clinch-knotted loop encased in a plastic sheath [5]. An endoclip was inserted through the endoscopic channel to the tip and the EndoTrac line was tied to it. The endoscope and traction device were simultaneously inserted into the duodenum. The endoclip with EndoTrac was positioned at the distal mucosa of the diverticular edge. The tip of the plastic sheath was advanced toward the endoclip, and the EndoTrac was pushed for

repositioning of the papilla. The duodenal papilla was moved from the diverticulum by manipulating the device (► Fig. 2). The traction force exerted by the device was adjusted to ensure optimal positioning of the duodenal papilla. The selective biliary cannulation was successful (► Fig. 3). Sphincterotomy and balloon dilatation were performed (► Fig. 4), and stone extraction was completed (► Fig. 5). Endoscopic biliary procedures using the EndoTrac device can provide good visualization of the papilla and facilitate biliary cannulation for the peridiverticular papilla.

Endoscopy\_UCTN\_Code\_TTT\_1AR\_2AC

### Conflict of Interest

The authors declare that they have no conflict of interest.

### The authors

**Kyosuke Tanaka**<sup>1,2,3</sup>, **Junya Tsuboi**<sup>3</sup>, **Kento Naruse**<sup>1,2,4</sup>, **Hiroki Yukimoto**<sup>3</sup>, **Shunsuke Nojiri**<sup>1,2,4</sup>, **Tomoyuki Nomura**<sup>1,2</sup>

- 1 Department of Internal Medicine, Inabe General Hospital, Inabe, Japan
- 2 Department of Gastroenterology, Inabe General Hospital, Inabe, Japan
- 3 Department of Gastroenterology, Mie University Graduate School of Medicine, Tsu, Japan

- 4 Department of Gastroenterology and Metabolism, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan

### Corresponding author

**Kyosuke Tanaka, MD, PhD, FJGES**

Department of Gastroenterology, Inabe General Hospital, 771 Ageki, Hokusei-cho, Inabe, Mie, 511-0428, Japan  
kyosuket@med.mie-u.ac.jp

### References

- [1] Altonbary AY, Bahgat MH. Endoscopic retrograde cholangiopancreatography in periampullary diverticulum: the challenge of cannulation. *World J Gastrointest Endosc* 2016; 8: 282–287. doi:10.4253/wjge.v8.i6.282
- [2] Inoue R, Kawakami H, Kubota Y et al. Endoscopic biliary intervention using traction devices for periampullary diverticulum. *Intern Med* 2019; 58: 2797–2801. doi:10.2169/internalmedicine.2804-19
- [3] Ishii T, Kin T, Katanuma A. Successful intervention using multiloop traction for cases with difficult biliary cannulation due to periampullary diverticula. *Dig Endosc* 2021; 33: e111–e113. doi:10.1111/den.14003
- [4] Iwano K, Toyonaga H, Kin T et al. Multiloop traction method during endoscopic hemostasis for post-sphincterotomy bleeding of the peridiverticular papilla. *Endoscopy* 2022; 54: E769–E770
- [5] Tanaka S, Toyonaga T, Kaku H et al. A novel traction device (EndoTrac) for use during endoscopic submucosal dissection. *Endoscopy* 2019; 51: E90–E91

### Bibliography

Endoscopy 2024; 56: E599–E600

DOI 10.1055/a-2351-3000

ISSN 0013-726X

© 2024. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited.

(<https://creativecommons.org/licenses/by/4.0/>)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany



### ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



*E-Videos* is an open access online section of the journal *Endoscopy*, reporting on interesting cases

and new techniques in gastroenterological endoscopy. All papers include a high-quality video and are published with a Creative Commons CC-BY license. Endoscopy E-Videos qualify for HINARI discounts and waivers and eligibility is automatically checked during the submission process. We grant 100% waivers to articles whose corresponding authors are based in Group A countries and 50% waivers to those who are based in Group B countries as classified by Research4Life (see: <https://www.research4life.org/access/eligibility/>).

This section has its own submission website at

<https://mc.manuscriptcentral.com/e-videos>