

Usefulness of the two-devices-in-one-channel technique for difficult bile duct intubation in patients without periampullary diverticulum

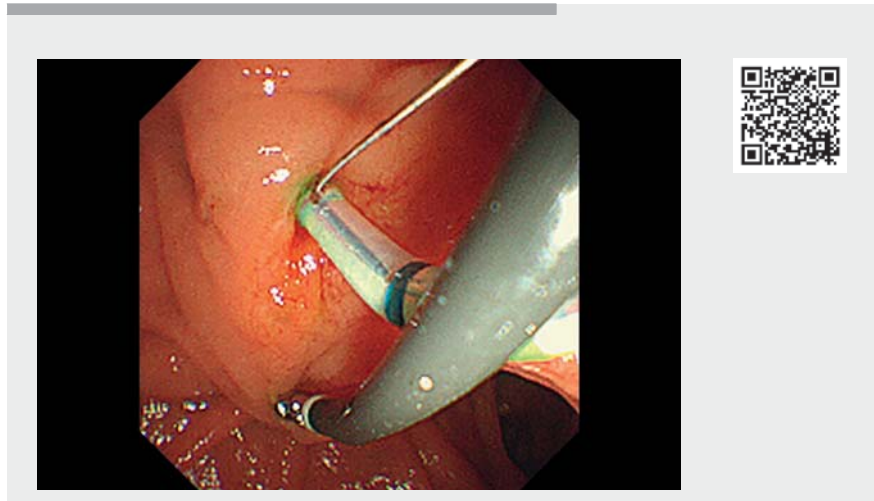


The two-devices-in-one-channel technique (2D-1C) has been reported as a useful method in cases of periampullary diverticulum [1, 2]. We experienced two cases in which 2D-1C was effective in patients without periampullary diverticulum, who presented with large oral protrusion and poor fixation of the papilla. These clinical features are among of the underlying causes of difficulties in bile duct cannulation [3].

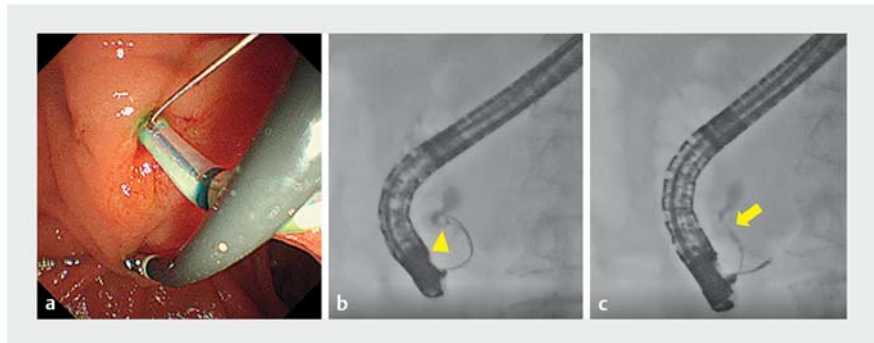
A duodenoscope with a 4.2-mm working channel (TJF 260V; Olympus, Tokyo, Japan), a sphincterotome (CleverCut3V; Olympus, Tokyo, Japan) loaded with a 0.025-inch guidewire (VisiGlide2; Olympus), and small biopsy forceps (FB45Q-1; Olympus) were used. These devices were placed in the same channel, and the forceps were used to grasp the anal side of the papilla and pull it towards the scope. Following this procedure, the large oral protrusion was stretched to reduce flexion, and the papilla was fixed closer to the scope.

In this video, we present these two cases without periampullary diverticulum in which the 2D-1C technique was an effective intervention (▶ **Video 1**). In the first case, the bend in the bile duct in the large oral protrusion was straightened by the 2D-1C, and selective bile duct intubation was performed with a guidewire (▶ **Fig. 1**). In the second case, it was possible to pull the papilla out with forceps and maintain it in position while the guidewire was inserted into the pancreatic duct. Subsequently, selective bile duct intubation was performed using the double guidewire method.

Between January 2020 and December 2020, the 2D-1C technique was used in seven cases without periampullary diverticulum, with successful bile duct or pancreatic duct intubation in six of the cases. A precut was required in the unsuccessful case. Successful bile duct or pancreatic duct intubation was achieved within 10 minutes in all cases.



▶ **Video 1** The two-devices-in-one-channel technique is also effective in cases where there is no periampullary diverticulum but where biliary intubation is difficult, such as where there is a large oral protrusion or inadequate fixation of the papilla.



▶ **Fig. 1** **a** The papilla was grasped with small biopsy forceps, pulled to the anal side, and the cannula was inserted into the orifice. **b, c** Cholangiography showed that the bile duct at the long oral protrusion was very bent (**b**, arrowhead), but it straightened when the duodenal papilla was pulled to the anal side with small biopsy forceps (**c**, arrow).

In conclusion, the 2D-1C technique is effective not only in cases of periampullary diverticulum, but also in cases without it where bile duct intubation is difficult to perform.

Endoscopy_UCTN_Code_TTT_1AR_2AB

Competing interests

The authors declare that they have no conflict of interest.

The authors

Takashi Kaneko¹, **Kazuya Sugimori**¹, **Kazuki Endo**¹, **Masaki Nishimura**¹, **Yuichiro Tozuka**¹, **Haruo Miwa**¹, **Shin Maeda**²

- 1 Gastroenterological Center, Yokohama City University Medical Center, Yokohama, Kanagawa, Japan
- 2 Department of Gastroenterology, Yokohama City University Graduate School of Medicine, Yokohama, Kanagawa, Japan

Corresponding author

Takashi Kaneko, MD

Gastroenterological Center, Yokohama City University Medical Center, 4-57 Urafune-cho, Minami-ku, Yokohama, Kanagawa 232-0024, Japan
taku47@yokohama-cu.ac.jp

References

- [1] Testoni PA, Mariani A, Aabakken L et al. Papillary cannulation and sphincterotomy techniques at ERCP: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2016; 48: 657–683
- [2] Gonzalez JM, Debourdeau A, Barthet M. How to facilitate cannulation of an intradiverticular papilla: a technique with two devices in one channel using pediatric forceps. *Endoscopy* 2019; 51: 1095–1096
- [3] Takenaka M, Yoshikawa T, Minaga K et al. A novel teaching tool for visualizing the invisible bile duct axis in 3 dimensions during biliary cannulation (compact disc method). *VideoGIE* 2020; 18: 389–394

Bibliography

Endoscopy 2023; 55: E76–E77
DOI 10.1055/a-1930-6258
ISSN 0013-726X
published online 30.9.2022
© 2022. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

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



ENDOSCOPY E-VIDEOS

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



Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at

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