

A duodenoscope anchoring technique in a case of difficult scope intubation due to scope–pyloric ring misalignment

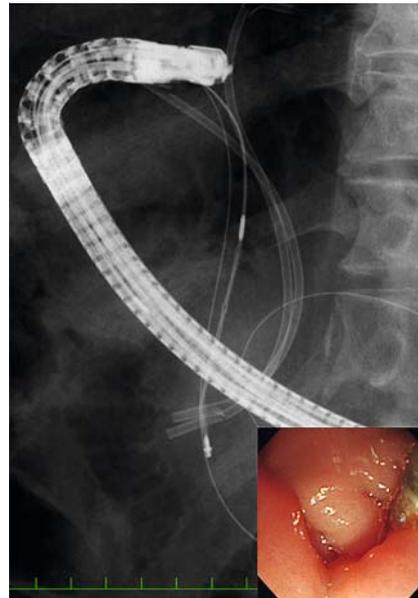


► **Fig. 1** Fluoroscopic image showing transpapillary 7-Fr biliary stents in a side-by-side position.



► **Fig. 2** Fluoroscopic image showing the duodenoscope can not pass the pyloric ring due to scope-pyloric ring misalignment (inset: endoscopic view).

Endoscopists are occasionally confronted with difficult scope intubation in a patient in the prone position due to misalignment between the scope and the pyloric ring. We present a case of difficult scope intubation through the pyloric ring during endoscopic retrograde cholangiopancreatography (ERCP), with tips for duodenoscope intubation.

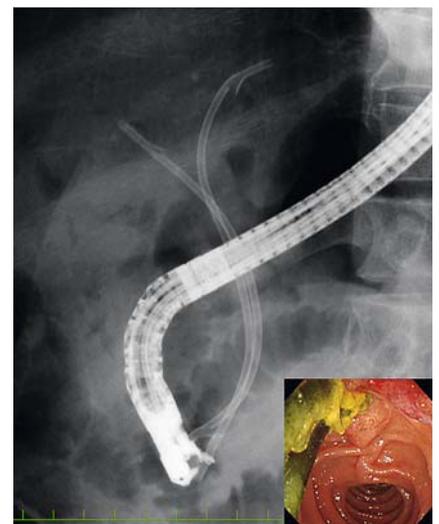


► **Fig. 3** Fluoroscopic image showing anchoring on the biliary stent using a basket catheter to pass the pyloric ring (inset: endoscopic view).

A 69-year-old man with biliary plastic stents in place for a benign biliary stricture and common bile duct (CBD) stones was referred to our department because of a difficult scope intubation through the pyloric ring to remove the stents. The stents were 7-Fr biliary plastic stents placed in a side-by-side fashion (► **Fig. 1**). With the patient in a prone position, we made repeated attempts to pass the scope beyond the pyloric ring, but these were unsuccessful because of scope–pyloric ring misalignment (► **Fig. 2**). As a next step, we advanced a four-wire basket (FG-V436P; Olympus, Tokyo, Japan) over the guidewire through the pyloric ring to grasp the ends of the stents, anchor the scope on the stents, and then adjust the scope–pyloric ring misalignment (► **Fig. 3**; ► **Video 1**). We then shortened the duodenoscope through coordinated pulling of the basket catheter into the working channel (► **Fig. 4**; ► **Video 1**). Finally, the

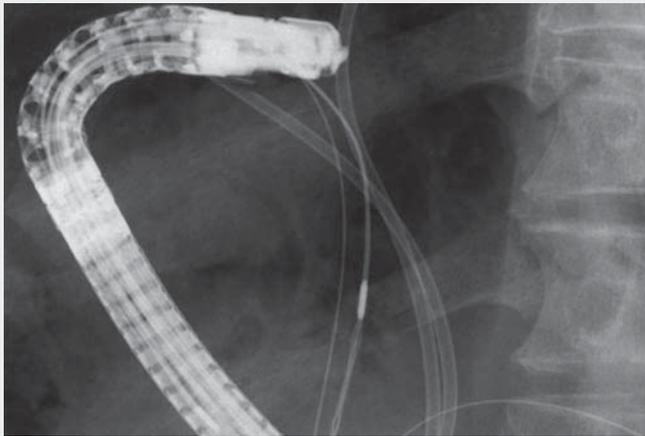


► **Fig. 4** Fluoroscopic image showing the duodenoscope is advanced during scope shortening with continuous pulling of the basket catheter into the scope channel.



► **Fig. 5** Fluoroscopic image showing the duodenoscope enface on the ampulla of Vater (inset: endoscopic view).

scope was able to pass the pyloric ring and reached the ampulla of Vater (► **Fig. 5**; ► **Video 1**). The stent was retrieved and the CBD stones extracted without adverse events. Prone ERCP is preferred to supine ERCP due to the high technical success rate



Video 1 Technique for advancing a duodenoscope through a scope–pyloric ring misalignment.

and shorter procedure duration [1]. One of the advantages of a supine position is that abdominal compression can be used if necessary [2]. However, the position is technically more difficult and potentially more risky [2]; the operator must turn his or her back on the patient to maintain an appropriate endoscopic view [3]. In cases where scope intubation in the prone position is difficult due to a misalignment between the scope and the pyloric ring, anchoring on a previously placed biliary stent using a basket catheter is useful to achieve scope intubation before changing the sedated patient to a supine position with abdominal compression.

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Competing interests

The authors declare that they have no conflict of interest.

The authors

Hiroshi Kawakami^{1,2}, **Yoshimasa Kubota**^{1,2}, **Tesshin Ban**^{1,2}, **Hiroshi Hatada**^{1,2}, **Souichiro Ogawa**^{1,2}, **Naomi Uchiyama**^{1,2}, **Daisuke Kuroki**²

- 1 Division of Gastroenterology and Hepatology, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan
- 2 Department of Gastroenterology and Hepatology, Division of Endoscopy and Center for Digestive Disease, University of Miyazaki Hospital, Miyazaki, Japan

Corresponding author

Hiroshi Kawakami, MD, PhD
Division of Gastroenterology and Hepatology, Department of Internal Medicine, Faculty of Medicine, University of Miyazaki, 5200, Kihara, Kiyotake, 889-1692 Miyazaki, Japan
hiropon@med.miyazaki-u.ac.jp

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