

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.

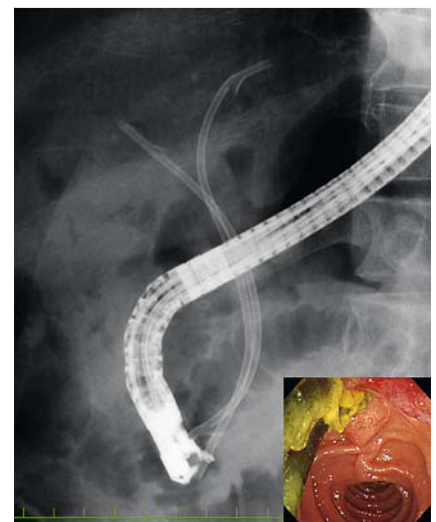


► **Fig. 3** Fluoroscopic image showing anchoring on the biliary stent using a basket catheter to pass the pyloric ring (inset: endoscopic view).

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 guide-wire 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

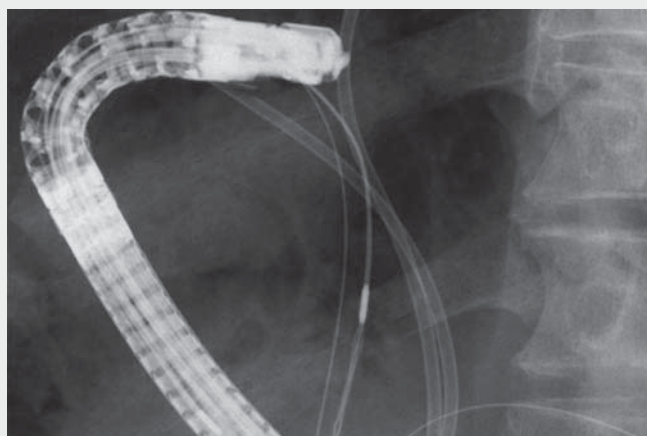


► **Fig. 4** Fluoroscopic image showing the duodenoscope is advanced during scope shortening with continuous pulling of the basket catheter into the scope channel.



► **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.

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