Endoscopic removal of a proximally migrated biliary stent using a novel gooseneck snare: the “EndoCowboy”

Proximal migration often occurs as an adverse event of biliary stent placement, with a reported migration rate of 3.1%–4.9% [1]. Although various techniques have been reported for endoscopic removal of proximally migrated biliary stents, the procedure is still technically demanding and time-consuming, and occasionally unsuccessful [2–4]. We describe a useful technique for endoscopic removal of a proximally migrated biliary stent using a novel gooseneck snare (▶Fig. 1).

A man in his 70s who had undergone placement of a 7-Fr straight plastic stent for benign biliary stricture was admitted to retrieve or exchange the stent; however, we noticed during endoscopic retrograde cholangiopancreatography (ERCP) that the stent had migrated proximally into the common bile duct (▶Fig. 2a). To remove the stent, biliary wire-guided cannulation was first performed, with the cannula (MTW Endoskopie, Wesel, Germany) being inserted near the distal end of the stent. After the guidewire had been removed, a gooseneck snare (EndoCowboy; loop width 9 mm; Piolax Medical Devices, Kanagawa, Japan) was inserted through the lumen of the prepositioned cannula (▶Fig. 2b). Once the snare loop had been passed over the stent, the snare...
was pulled tight, grasping the stent (▶ Fig. 2c). Finally, the cannula and snare were simultaneously pulled down and the stent was successfully removed though the scope with no adverse events (▶ Video 1).

A gooseneck snare has a microsnare loop forming a 90° angle just after exiting the outer sheath. It is useful for retrieving and manipulating foreign objects in the cardiovascular system [5], but until now there have been no devices for endoscopic use. The EndoCowboy was developed for ERCP. Its 2700-mm length is suitable for an endoscopic device, and various loop sizes are available to suit the diameter of the bile duct. This novel gooseneck snare can therefore be a useful option for the removal of proximally migrated stents and is recommended to have on standby.

Endoscopy_UCTN_Code_TTT_1AR_2AZ

Competing interests
None

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DOI https://doi.org/10.1055/s-0043-119982
Published online: 9.10.2017
Endoscopy 2017; 49: E321–E322
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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