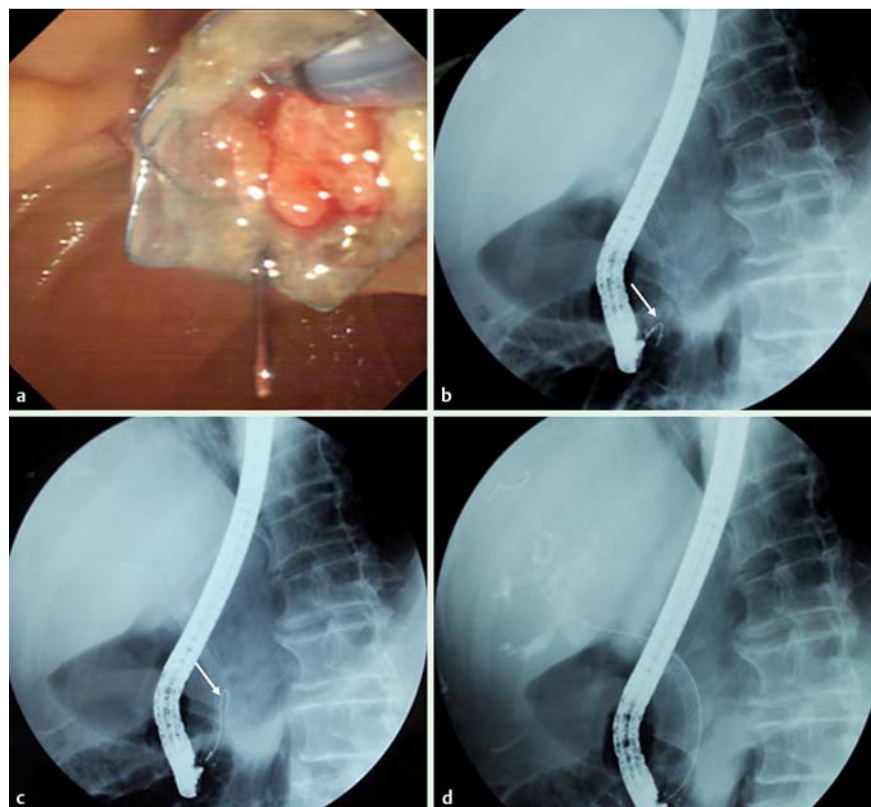


## The “U-wire” technique during ERCP for easy guide wire passage through occluded uncovered metal stents



**Fig. 1** Endoscopic and radiographic views of the U-shaped guide wire technique for passage of a guide wire through an occluded uncovered metal stent. **a** Endoscopic view of the U-shaped guide wire positioned at the end of the metal stent. **b** Radiographic image of the U-shaped tip of the wire at the distal end (nearest the ampulla) of the metal stent (white arrow). **c** Radiographic image of the U-shaped wire in the lumen of the metal stent (white arrow). **d** Radiographic image of the guide wire after it has been passed through the stent lumen into the proximal bile duct.

A significant number of self-expanding metal stents (SEMSs) placed as conservative therapy for malignant biliary obstruction will become occluded [1]. Stent occlusion can be treated endoscopically either by balloon trawling to remove the biliary sludge and debris or by inserting a polyethylene stent or a second stent through the occluded stent [2]. However, these treatments can be given only after a guide wire is passed through the occluded lumen of the stent into the bile duct beyond [1], and not infrequently during endoscopic retrograde cholangiopancreatography (ERCP), a guide wire accidentally passes through the mesh of an uncovered

metal stent, which may result in prolongation of the ERCP procedure or fluoroscopy.

Here, we present a simple method that avoids guide wires being unintentionally passed through the stent mesh: the “U-wire” technique. About 2–3 cm of the guide wire is first passed out of the sphincterotome, and biliary cannulation is then completed with the sphincterotome (► Fig. 1a). The tip of the wire remains outside the papilla and the body of the wire is advanced into the lumen of the stent along with the sphincterotome. The wire is therefore formed into a “U” shape in the occluded stent and as a result, it

can be easily passed through the lumen of the stent without the tip of the wire passing through the mesh (► Fig. 1b–d). This U-wire cannulation method is an extremely effective and simple technique that avoids the risk of accidental passage of a guide wire through the mesh of a metal stent.

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**Competing interests:** None

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