

# EUS-guided antegrade metal stent deployment using a novel fully covered metal stent with a fine gauge stent delivery system (with video)

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EUS-guided antegrade stent deployment (EUS-AG) is an alternative technique for patients with the complication of an inaccessible papilla.<sup>[1-4]</sup> One of the advantages of EUS-AG is decreased bile leak before stent deployment from the intrahepatic bile duct to the stomach; therefore, it is ideal that EUS-AG can be performed without additional fistula dilation such as with a balloon dilator or electrocautery dilator. To prevent stent dislocation, an uncovered metal stent

is mainly selected as the EUS-AG stent according to previous reports. However, compared with a fully covered self-expandable metal stent (FCSEMS), stent patency of uncovered metal stents is shorter. Recently, a novel FCSEMS has become available in Japan (BileRush Advance, Piolax, Kanagawa,



**Figure 1.** BileRush Advance (Piolax, Kanagawa, Japan). The size of the stent delivery system is only 7 Fr, and the stent has a laser cut construction and both ends are flared



**Figure 2.** The intrahepatic bile duct is punctured using a 19G needle, and the contrast medium is injected

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**Figure 3.** The 0.025-inch guidewire is successfully inserted into the intestine across the stricture site



**Figure 4.** Antegrade stent deployment is successfully performed



**Figure 5.** Plastic stent deployment is performed from the intrahepatic bile duct to the intestine

Japan) [Figure 1]. The stent delivery system is only 7 Fr in size, and the stent has a laser cut construction and both ends are flared. Therefore, this system might allow stent insertion by fistula dilation up to 7 Fr, and stent dislocation might also be prevented. We herein describe the technical procedure of EUS-AG using this novel FCSEMS.

The intrahepatic bile duct is punctured using a 19G needle, and contrast medium is injected [Figure 2]. A 0.025-inch guidewire is deployed into the biliary tree. The Endoscopic retrograde cholangiopancreatography catheter is then inserted, and guidewire insertion into the intestine across the stricture site is successfully performed [Figure 3]. Next, the novel FCSEMS (10 mm × 6 cm) is inserted antegradely without additional fistula dilation, and stent release is carefully performed across the stricture site [Figure 4]. Finally, EUS-HGS was performed using plastic stent [Figure 5 and Video 1]. To prevent bile leak, this novel stent can be inserted across a fistula that has been dilated up to 7 Fr. Therefore, the presented technique might successfully decrease the incidence of adverse events such as bile peritonitis, although this technique needs further evaluation in clinical trials.

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#### *Conflicts of interest*

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#### REFERENCES

1. Iwashita T, Uemura S, Mita N, *et al.* Endoscopic ultrasound guided-antegrade stenting vs percutaneous transhepatic biliary stenting for unresectable distal malignant biliary obstruction in patients with surgically altered anatomy. *J Hepatobiliary Pancreat Sci* 2020;27:968-76.
2. Yamamoto K, Itoi T, Tsuchiya T, *et al.* EUS-guided antegrade metal stenting with hepaticocenterostomy using a dedicated plastic stent with a review of the literature (with video). *Endosc Ultrasound* 2018;7:404-12.
3. Ogura T, Kitano M, Takenaka M, *et al.* Multicenter prospective evaluation study of endoscopic ultrasound-guided hepaticogastrostomy combined with antegrade stenting (with video). *Dig Endosc* 2018;30:252-9.
4. Ogura T, Masuda D, Imoto A, *et al.* EUS-guided hepaticogastrostomy combined with fine-gauge antegrade stenting: A pilot study. *Endoscopy* 2014;46:416-21.