Endoscopic ultrasound-guided antegrade diathermic dilation followed by self-expandable metal stent placement for malignant distal biliary stricture

Endoscopic ultrasound (EUS)-guided antegrade stenting (AGS) is established as an alternative interventional technique in patients in whom endoscopic transpapillary stenting has failed [1,2]. Here, we present a patient who underwent EUS-AGS after diathermic dilation with placement of a self-expandable metal stent (SEMS) for a malignant distal biliary stricture.

A 58-year-old woman with cancer of unknown origin and obstructive jaundice was referred to our hospital. She had undergone transpapillary stenting using a plastic stent at another hospital 2 months previously. Esophagogastroduodenoscopy (EGD) to reach the papilla of Vater was not feasible because of gastric outlet obstruction. Therefore, we attempted EUS-AGS via the stomach. First the intrahepatic bile

![Radiographic images showing:](image-url)

- a guidewire that has been advanced into the duodenum across the distal biliary stricture and the plastic stent that was previously placed via the transpapillary approach;
- the tapered endoscopic retrograde cholangiopancreatography (ERCP) catheter that could not be advanced across the stricture;
- the wire-guided diathermic dilation being performed;
- free drainage of contrast after endoscopic ultrasound-guided antegrade wire-guided diathermic dilation and antegrade placement of a biliary self-expandable metal stent (SEMS).
duct was punctured using a 19-gauge needle and an EUS-guided cholangiogram was performed. Following this a 0.025-inch guidewire was advanced across the stricture alongside the plastic stent under fluoroscopic guidance (Fig. 1a). Thereafter, we tried to dilate the stricture using a tapered endoscopic retrograde cholangiopancreatography (ERCP) catheter, but it was not possible to pass the catheter across the stricture (Fig. 1b). We then performed a dilation of the stricture using a 6-Fr wire-guided diathermic dilator (Cysto-Gastro-Set; EndoFlex, GmbH, Voerde, Germany) with a blended cut mode (Fig. 1c). Finally, an uncovered SEMS with a fine delivery system (Zilver635; Cook Japan, Tokyo, Japan) was placed across the stricture alongside the obstructed plastic stent without any complications (Fig. 1d; Video 1). Recently, EUS-AGS using a tapered ERCP catheter and an uncovered SEMS with a fine delivery system has been reported [3]. We also reported EUS-guided antegrade wire-guided diathermic dilation followed by SEMS placement for refractory severe benign biliary stricture [4]. To our knowledge, this is the first report of combined EUS-AGS with diathermic dilation and placement of an uncovered SEMS for a malignant biliary stricture. EUS-guided antegrade wire-guided diathermic dilation is useful for severe strictures that cannot be dilated with conventional techniques as well as for the transpapillary approach [5].

Endoscopy_UCTN_Code_TTT_1AS_2AD

Competing interests: None

Hiroshi Kawakami, Masaki Kuwatani, Kazumichi Kawakubo, Taiki Kudo, Yoko Abe, Kimitoshi Kubo, Yoshimasa Kubota, Naoya Sakamoto
Department of Gastroenterology and Hepatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan

References
5 Kawakami H, Kuwatani M, Kawakubo K et al. Transpapillary dilation of refractory severe biliary stricture or main pancreatic duct by using a wire-guided diathermic dilator (with video). Gastrointest Endosc 2014; 79: 338 – 343

Bibliography
DOI http://dx.doi.org/10.1055/s-0034-1377223
Endoscopy 2014; 46: E328-E329
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Corresponding author
Hiroshi Kawakami, MD, PhD
Department of Gastroenterology and Hepatology, Hokkaido University Graduate School of Medicine, Kita 15, Nishi 7, Kita-ku, Sapporo 060-8638, Japan
Fax: +81-11-7067867
hiropon@med.hokudai.ac.jp

Video 1
Endoscopic ultrasound (EUS)-guided antegrade diathermic dilation and stenting for a severe refractory distal biliary stricture following conventional transpapillary stenting.